JOINT PUBLIC NOTICE

January 27, 2020

United States Army
Corps of Engineers
New Orleans District
Regulatory Branch
7400 Leake Avenue
New Orleans, LA. 70118

(504) 862-1280/ FAX (504) 862-2574
Brandon.D.Gaspard@usace.army.mil
Project Manager
Brandon Gaspard
Permit Application Number
MVN-2016-00228-MG

State of Louisiana
Department of Environmental Quality
Post Office Box 4313
Baton Rouge, La. 70821-4313
Attn: Water Quality Certifications

(225) 219-3225/FAX (225) 325-8250
elizabeth.hill@la.gov
Project Manager
Elizabeth Hill
WQC Application Number
WQC 170823-01

Interested parties are hereby notified that a prospectus and permit application has been received by the New Orleans District of the U.S. Army Corps of Engineers pursuant to: [ ] Section 10 of the Rivers and Harbors Act of March 3, 1899 (30 Stat. 1151; 33 USC 403); and/or [X] Section 404 of the Clean Water Act (86 Stat. 816; 33 USC 1344).

Application has also been made to the Louisiana Department of Environmental Quality, for a Water Quality Certification (WQC) in accordance with statutory authority contained in Louisiana Revised Statutes of 1950, Title 30, Chapter 11, Part IV, Section 2074 A(3) and provisions of Section 401 of the Clean Water Act (P.L.95-17).

FAMILY FARMS MITIGATION BANK IN LAFOURCHE PARISH

NAME OF APPLICANT: Family Farms Investments, L.L.C., c/o: JMB Partnership, Inc., 205 Sage Glenn Lane, Lafayette, Louisiana 70508.

LOCATION OF WORK: The site is located in Lafourche Parish, four miles southwest of Chackbay, Louisiana, as shown on enclosed drawings (Latitude: 29.84958 N, Longitude:–90.858403 W). The Project is located within the Barataria Basin.

CHARACTER OF WORK: Family Farms Investments, L.L.C. proposes to degrade multiple agricultural levees and conduct native vegetation plantings for the purpose of enhancing and restoring traditional surface hydrology in the construction of a bottomland hardwood mitigation bank.

The comment period for the Department of the Army Permit and the Louisiana Department of Environmental Quality WQC will close **30 days** from the date of this joint public notice. Written comments, including suggestions for modifications or objections to the proposed work, stating reasons thereof, are being solicited from anyone having interest in this permit and/or this WQC request and must be mailed so as to be received before or by the last day of the comment period. Letters concerning the Corps of Engineers permit application must reference the applicant's name and the Permit Application Number, and be mailed to the Corps of Engineers at the address above, **ATTENTION: REGULATORY BRANCH**. **Similar letters concerning the Water Quality Certification must reference the applicant's name and the WQC Application**

number and be mailed to the Louisiana Department of Environmental Quality at the address above.

The application for this proposed project is on file with the Louisiana Department of Environmental Quality and may be examined during weekdays between 8:00 a.m. and 4:30 p.m. Copies may be obtained upon payment of costs of reproduction.

Corps of Engineers Permit Criteria

The decision whether to issue a permit will be based on an evaluation of the probable impacts, including cumulative impacts of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered including the cumulative effects thereof; among those are conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership and, in general, the needs and welfare of the people.

The U.S. Army Corps of Engineers is soliciting comments from the public, federal, state, and local agencies and officials, Indian Tribes, and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the U.S. Army Corps of Engineers to determine whether to make, modify, condition, or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

The New Orleans District is unaware of properties listed on the National Register of Historic Places near the proposed work. The possibility exists that the proposed work may damage or destroy presently unknown archeological, scientific, prehistorical, historical sites, or data. Copies of this public notice will be forwarded to the State Archeologist and State Historic Preservation Officer regarding potential impacts to cultural resources.

Our initial finding is that the proposed work will have no effect any species listed as endangered by the U.S. Departments of Interior or Commerce, nor affect any habitat designated as critical to the survival and recovery of any endangered species. Utilizing Standard Local Operating Procedure for Endangered Species in Louisiana (SLOPES) dated October 22, 2014, between the U.S. Army Corps of Engineers, New Orleans and U.S. Fish and Wildlife Service, Ecological Services Office, the Corps has determined that the proposed activity would have no effect on any listed species.

This notice initiates the Essential Fish Habitat (EFH) consultation requirements of the Magnuson-Stevens Fishery Conservation and Management Act. The applicant's proposal would result in the destruction or alteration of N/A acre(s) of EFH utilized by various life stages of red drum and penaeid shrimp. Our initial determination is that the proposed action would not have a substantial adverse impact on EFH or federally managed fisheries in the Gulf of Mexico. Our

final determination relative to project impacts and the need for mitigation measures is subject to review by and coordination with the National Marine Fisheries Service.

If the proposed work involves deposits of dredged or fill material into navigable waters, the evaluation of the probable impacts will include the application of guidelines established by the Administrator of the Environmental Protection Agency. Also, a certification that the proposed activity will not violate applicable water quality standards will be required from the Department of Environmental Quality, before a permit is issued.

Any person may request, in writing, within the comment period specified in this notice, that a public hearing be held to consider this application. Requests for public hearings shall state, with particularity, the reasons for holding a public hearing.

You are requested to communicate the information contained in this notice to any other parties whom you deem likely to have interest in the matter.

The applicant has certified that the proposed activity described in the application complies with and will be conducted in a manner that is consistent with the Louisiana Coastal Resources Program. The Department of the Army permit will not be issued unless the applicant received approval or a waiver of the Coastal Use Permit by the Department of Natural Resources.

You are requested to communicate the information contained in this notice to any other parties whom you deem likely to have interested in the matter.

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Date: 2020.01.23 15:30:54 -06'00'

for Martin S. Mayer
Chief, Regulatory Branch

Enclosure

Prospectus for the Family Farms Mitigation Bank

MVN-2016-00228-MG

Lafourche Parish, Louisiana

January 03, 2020

JMB Partnership, Inc.
205 Sage Glenn Lane
Lafayette, LA 70508
(337) 828-7090
POC: Mr. Russell Walters
russell@jmbcompanies.com

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1.0 INTRODUCTION

JMB Partnership, LLC (JMB and/or Sponsor), submits this Prospectus to the U.S. Army Corps of Engineers - New Orleans District (CEMVN) and the CEMVN Mitigation Banking Interagency Review Team (IRT) in sponsorship of establishing Family Farms Mitigation Bank (FFMB and/or Bank) (MVN-2016-00228-MG). The Sponsor has prepared this Prospectus in accordance with 33 CFR § 332.8(d)(2). The purpose of FFMB is to compensate for unavoidable impacts to Waters of the United States, including wetlands that result from activities authorized by the Department of the Army pursuant to Section 404 of the Clean Water Act and/or Section 10 of the Rivers and Harbors Act.

FFMB is currently comprised of single aquaculture production pond (crawfish) in which hydrology is artificially controlled through a series of man-made levees and water control structures (Attachment B: Figure 15). FFMB has the potential to be restored to bottomland hardwoods (BLH) habitat through the implementation of re-establishment and rehabilitation Mitigation Types as defined in the CEMVN Louisiana Wetland Rapid Assessment Method Version 2.0 (LRAM) and the *LRAM Version 2.0 Excel Worksheet*. The Sponsor will restore 112.9 acres to BLH wetlands and 2 acres to upland restoration for a total of 114.9 acres (Attachment A: Table 1 and LRAM BLH). FFMB will have long-term protection through financial assurances with long-term escrow accounts and the institution of conservation servitude.

1.1 Site Location

The center point of the property is located at latitude 29.849735º and longitude -090.858469º in Lafourche Parish, Louisiana (Attachment B: Figure 1). The location includes all or portions of Sections 58 and 59 of Township 14 South, Range 16 East (Attachment B: Figure 2). The property is located approximately 4.7 miles northwest from Thibodaux, Louisiana. The property is located in the Hydrologic Unit Code (HUC) 08090301, East Central Louisiana Coastal within the Barataria Basin.

FFMB topography is generally flat with a gradual downward slope to the northeast with higher elevations occurring along interior levees and the water containment access road. Property elevation data collected within the aquaculture production pond with a Real-Time Kinematic GNSS (RTK) revealed an elevation range from 1.64’ to 2.50’ relative to NAVD88 datum (Attachment B: Figure 7A). According to state-sponsored LIDAR there are 9.5 acres over the 5’ contour within the FFMB boundary (Attachment B: Figure 8). However, after site construction is completed, FFMB will contain only 2 acres that are over the 5’ contour, all of which are upland restoration acreage.

Lafourche Parish has a humid, subtropical, marine climate. Lafourche Parish’s average annual total precipitation is about 59.35 inches. Of this, about 33 inches, or 60 percent, usually falls in April through September. In winter, the average temperature is 54°F, and the average daily minimum temperature is 44°F. In summer, the average temperature is 81°F and the average daily maximum temperature is 90°F. The sun shines 60 percent of the time in summer and 50 percent in winter (NRCS).

State and Federal jurisdictional boundaries that encompass FFMB include the following; the Louisiana Office of Coastal Management (OCM) Deltaic Region of the Louisiana Coastal Zone, the Natural Resources Conservation Service (NRCS), Mississippi Delta Cotton and Feed Grains Land Resource Region (LRR O), and the Southern Mississippi

River Alluvium Major Land Resource Area (MLRA 131A). The FFMB also lies in the Environmental Protection Agency (EPA) designated Mississippi Alluvial Plain (73) Level III Ecoregion, and in two different Level IV Ecoregions; Inland Swamps (73n) and Southern Holocene Meander Belts (73k). According to the Federal Emergency Management Agency (FEMA), FFMB is within the 100-year flood zone.

1.2 Driving Directions

From Canal Blvd in Thibodaux head west on LA-308 N along Bayou Lafourche, turn right on LA-304 N (4.4 miles), turn right at 1593 LA-304, Thibodaux, LA 70301 (3.4 miles), and finally head south on unnamed dirt road to access property.

2.0 PROJECT GOALS AND OBJECTIVES

The goal of FFMB is the cumulative re-establishment of 9.9 acres of bottomland hardwood (BLH), rehabilitation of 103 acres of BLH, and the restoration of 2 acres of upland buffer in the Barataria Basin watershed (HUC:08090301). The total acreage of FFMB is 114.9 The current and proposed habitat types, proposed mitigation types, and acreage are listed in Attachment A: Table 1 & Attachment B: Figures 15 & 16.

The objectives of the Bank are diverse. FFMB is strategically situated in the Lafourche Basin and is capable of restoring and improving a range of physical, hydrological, biogeochemical, biotic, and atmospheric functions to the watershed. These objectives are as follows:

- Improving downstream water quality and soil compaction by ceasing all aquaculture production activities within the Bank boundary.

- Restoring soil quality by subsoiling to reduce soil compaction and increase surface water infiltration to improve the success of vegetative plantings.

- Restoring natural tidal hydrologic cycling and flood storage of FFMB by levee degradation, and the expansion of hydrologic entrance points. Inundate soils would return natural historic hydric process to the soils.

- Restoring FFMB’s topography and vegetative habitats to institute reclamation of the organic material to the system’s soil, and filter sediment deposition runoff into Eighty Arpent Canal.

- Rebuilding bottomland hardwood habitats (Attachment A: Table 1) with native wetland trees and emergent species. This will positively affect the physical structure of the area and restore biogeochemical processes in the soil considerably via additional plant and invertebrate detritus. This, in turn, will enhance natural aesthetics of the area.

- Restoring existing levee as an upland buffer by planting trees, will reduce adverse impacts to wetland functions from adjacent development by moderating stormwater runoff, stabilizing soil to prevent erosion, providing habitat for wetland associated species, reducing direct human impact/access to a wetland, and by filtering suspended solids, nutrients, and toxic substances.

- Restoring the site will provide improved biotic conditions and create habitat for a multitude of mammals, reptiles, insects, and hundreds of species of migratory birds.

- Ensuring the quality of FFMB habitat through annual vegetation monitoring, noxious invasive species control, and adaptive management if necessary.

- Providing long-term protection through financial assurances with long-term escrow accounts and the institution of a conservation servitude.

As defined by *The Natural Communities of Louisiana* published in 2009 by the Louisiana Department of Wildlife and Fisheries (LDWF) and the Louisiana Natural Heritage program (LNHP): Bottomland Hardwood Forests are forested, alluvial wetlands occupying broad floodplain areas that flank large river systems. BLH forests may be called fluctuating water level ecosystems characterized and maintained by a natural hydrologic regime of alternating wet and dry periods. These forests support distinct assemblages of plants and animals.

3.0 ECOLOGICAL SUITABILITY OF SITE/BASELINE CONDITIONS

This section describes the ecological suitability of the site to achieve the objectives of the proposed mitigation bank, including the physical, chemical, and biological characteristics of the Bank site and how that site will support the planned types of aquatic resources and functions, as stated in 33 CFR 332.8(d)(2)(vii)(B). This section provides the baseline/current site conditions on and adjacent to the proposed site.

3.1 Land Use

3.1.1 Historical Land Use

It is believed the mechanized clearing and hydrologic alteration of this site began around the turn of the 20th century with the clearing of woody vegetation to increase cropland acreage. Aerial imagery from 1961 reveals the crop rows and agricultural drains that were used primarily for sugarcane (*Saccharum officinarum*) production (Attachment B: Figure 3A). This imagery also indicates the northern portion of the project area displaying wet conditions. Local farm history, as well as historical aerial photographs, dictate this site was farmed for sugarcane up until the late '70s to early '80s (Attachment B: Figure 3B & 3C). In the 90s sugarcane production ceased due to the site's wet conditions which were not conducive to agriculture production. In the late 1990’s levees, culverts, drainage pipes and lift pumps were installed to create a single large aquaculture (crawfish) production pond (Attachment B: Figure 3D). Family Farms Investments, LLC acquired the Bank property in early 2008.

3.1.2 Existing/Current Land Use

Currently, the following habitats occur within FFMB: 103 acres of aquaculture production pond, 3.2 acres of interior levees and 8.7 acres of access roads (Attachment B: Figures 3E, 3F, 3G & 15). The land use surrounding a one-mile radius of FFMB consists mostly of woody wetlands, sugarcane production, and soybean production. (Attachment B: Figure 4).

3.2 Soils

The Lafourche Parish Soil Survey (1984) and USDA Web Soil Survey at FFMB reveal approximately 27.2 acres of soils mapped have a hydric rating from 1 to 32% and 83.6 acres of soils mapped have a hydric rating from 66 to 90%. FFMB also contains 4.1 acres of mapped water (Attachment A: Table 2 & Attachment B: Figures 5 & 6).

According to Lafourche Parish Soil Survey (1984) and USDA Web Soil Survey of the subject property, the following soils are found to occur:

- Cancienne silt loam 0 to 1 percent slopes (Cm). The Cancienne series consists of very deep, level to gently undulating, somewhat poorly drained mineral soils that are moderately slowly permeable. These soils formed in loamy and clayey alluvium. They are on high and intermediate positions on natural levees and deltaic fans of the Mississippi River and its distributaries. Slopes range from 0 to 3 percent.

- Schriever clay 0 to 1 percent slopes (Sk). The Schriever series consists of very deep, poorly drained, very slowly permeable soils that formed in clayey alluvium. These soils are on the lower parts of natural levees and in backswamp areas of the lower Mississippi River alluvial plain. Slopes range from 0 to 3 percent.

3.3 Hydrology

3.3.1 Contributing Watershed

The Barataria Basin is located immediately south and west of New Orleans, Louisiana. The basin is bounded on the north and east by the Mississippi River from Donaldsonville to Venice, on the south by the Gulf of Mexico, and on the west by Bayou Lafourche. The basin contains approximately 1,565,000 acres. Portions of nine parishes are found in the basin: Assumption, Ascension, St. James, Lafourche, St. John the Baptist, St. Charles, Jefferson, Plaquemines, and Orleans. The basin is divided into nine subbasins: Fastlands, Des Allemands, Salvador, Central Marsh, Grande Cheniere, L'Ours, North Bay, Bay, and Empire (The Barataria Basin: CWPPRA). Several natural and constructed physiographic features in the Barataria Basin influence habitat distribution, hydrology, land use, and wetland restoration opportunities. Major features include natural and artificial levees of the Mississippi River and Bayou Lafourche, the GIWW, U.S. Highway 90, the central marsh landmass, the chenier complex, and a chain of barrier islands (The Barataria Basin: CWPPRA). The average annual rainfall over the Lafourche Parish is approximately 63.70 inches. Of this, about 53.87 inches (85 percent) usually falls in February through November. During the year, July is the wettest month and October is the driest (Soil Survey of Lafourche Parish). Watershed sources include direct precipitation, surface runoff, high water tables, and tidal flooding.

3.3.2 Historical Hydrology and Drainage Patterns

Historically, Mississippi River channel migration, crevasses, and overbank flooding deposited sediment, freshwater, and nutrients in the Barataria Basin, building land and sustaining wetland habitats (The Barataria Basin: CWPPRA). However, the Basin has been closed to river flow since the leveeing of the Mississippi River in the 1930-40s and the closing of the Bayou Lafourche-Mississippi River connection in 1902 (Conner). Ever since construction of the flood control levee along the Mississippi River, rainfall had been the main source of fresh water to the Barataria Basin. Currently, only a small amount of riverine input, designed to mimic a natural crevasse, was introduced into the basin's

wetlands through the siphons at Naomi and West Pointe à la Hache and also the Davis Pond freshwater diversion.

Historically, the hydrological influences of FFMB prior to agricultural production were runoff from the neighboring natural ridges from Bayou Lafourche, backwater flooding from the forested wetlands to the north, direct precipitation, and high water tables. Since the turn of the 20th century the hydrology within FFMB has been intensively managed for agriculture through a combination of levees, drainage ditches, drainage pipes, detention ditches, and lift pumps.

3.3.3 Existing/Current Hydrology and Drainage Patterns

The current sources of hydrology within the project area include direct precipitation, high water tables and irrigation from an external canal. These hydrological sources are manipulated by combination of levees, culverts with slid gates, culverts with catch basins and slide gates, containment canals, and lift pumps. These hydrological controls irrigate and de-water the project area for the aquaculture production of crawfish. This closed hydrological system allows for no free exchange of water from the aquaculture production area to the outside watershed.

When irrigating for crawfish production, the owner operated lift pump in the southeast corner of the crawfish pond pumps water from the adjacent unnamed external canal onto the project area. This pumped water then flows northwest within a leveed water containment canal where it can be directed via culverts with slid gates, either north into the southeastern portion of the crawfish pond or continue northwest to the southwestern portion crawfish pond. The water flow is then directed in by Interior baffle levees until a 4 to 6-inch depth pond is created within the crawfish pond area. Water depth within the pond is regulated by four individual culverts with catch basins and slide gates (water control structures) in the northern portion of the project area. De-watering of the crawfish pond occurs when the slide gates are manually removed from the three individual culverts with catch basins in the northern portion of the project area. Water then flows north through the culverts, outside of the project area into the North Lafourche Levee District's force drainage canal which then directs water flow east to a pump station that pumps water into the Eighty (80) Arpent Canal. The North Lafourche Levee District maintains this force drainage canal and pump station. The crawfish pond can also be de-watered by manually removing the slide gate from the culvert with a catch basin in the northeastern portion of the project area. When the slide gate is removed water flows into the unnamed adjacent external canal that eventually flows into the Eighty (80) Arpent Canal (Attachment B: Figures 13).

The current hydrological connection of the canals and ditches immediately outside of the proposed Bank is the un-named canals on the west, south, and east side of the Bank. These canals interconnect with the Eighty (80) Arpent Canal. From the Eighty (80) Arpent Canal water can flow northward into Bayou Onion, then to Grand Bayou, then on to Bayou Boeuf which connects into Lac des Allemands. Water from the Eighty (80) Arpent Canal can also flow east into the St. James Canal, to Grand Bayou then Bayou Boeuf with a connection with Lac des Allemands (Attachment B Figure 10 & 10A). All these canals and bayous have bi-directional water flow (Attachment D).

3.3.4 Jurisdictional Wetlands

The Landowner contracted D&S Environmental Services, inc., to conduct a wetland delineation of the property that includes FFMB, which was then approved by the CEMVN

as a preliminary jurisdictional determination (MVN-2016-00228-SQ) on June 9, 2016. (Attachment E). The said wetland delineation includes acreage that is not within the proposed FFMB boundary. It is important to note the approved JD (MVN-2016-00228-SQ) does not cover the entirety of the FFMB. Because of this the Sponsor conducted a second wetland delineation on the southern portion of the Bank which was then sent to the CEMVN for a preliminary jurisdictional determination (Attachment E). The two wetland delineations reveal the FFMB boundary contains approximately 103 acres of jurisdictional wetlands and 11.9 acres of uplands (Attachment B: Figures 18 & 19).

3.4 Vegetation

3.4.1 Historical Plant Community

Based on comparison to reference sites with similar soil, geology, topography, and potentially similar historical/current habitat type, such as the forested wetland area (PFO1A) directly east of FFMB, nearby Greenwood Mitigation Bank (MVN-2009-01145-MS), and CRMS5672, it is assumed that native vegetation was comprised of bottomland hardwood forest (Attachment B: Figures 20). The USFWS lists the forested area directly east of FFMB as NWI habitat palustrine forested broad-leaved deciduous temporary flooded (PFO1A) (Attachment B: Figure 11). Elevation data collected with a Real-Time Kinematic GNSS (RTK) revealed the elevation of the forested wetland area closely resembles the elevation of FFMB (Attachment B: Figure 7A).

3.4.2 Existing Plant Community

USFWS lists two different NWI habitat classifications within the Project Area. The majority of FFMB is classified as palustrine unconsolidated bottom permanently flooded excavated (PUBHx). The second classification is palustrine emergent persistent seasonally flooded diked/impounded (PEM1Ch) (Attachment B: Figure 11).

Because of the closed hydrological system of the project area, 3 distinct vegetative habitats were found to occur at FFMB. Habitat investigations and data from the wetland delineation revealed the following habitats at FFMB (Attachment B: Figure 15).

The area defined as Aquaculture Production/Crawfish Pond was observed to have wet conditions. This wet herbaceous community only exists due to the water level management for crawfish production. The water level is artificially maintained higher than outside natural water levels in order to have crawfish production. The outside natural water levels do not and cannot provide sufficient continuous water levels for crawfish production without the use of the pump and levees. The topography within this area slopes slightly to the north where four individual culverts with catch basins and slide gates can maintain water levels or drain the pond. The herb stratums of this area contained herbaceous plants with a wetland indicator status of FAC, FACW, or OBL. Dominant vegetation species within this portion of the project area include: bulltongue arrowhead *(Sagittaria* lancifolia), (OBL); knotweed *(Polygonum aviculare)*, (FAC); alligator weed (*Alternanthera philoxeroides*), (OBL); and torpedo grass (*Panicum repens*) (FACW).

The area defined as Interior Levees was observed to be non-wet baffle levees. These earthen baffle levees are used in aquaculture to guide water through the pond for proper aeration and to help maintain proper water quality. The herb stratum had herbaceous plants with a wetland indicator status of FACU, FAC, or OBL. Dominant vegetative species observed within this portion of the project area included: bermuda grass (*Cynodon dactylon*) (FACU); knotweed *(Polygonum aviculare)*, (FAC); alligator weed (*Alternanthera philoxeroides*), (OBL) and Crowngrass *(Paspalum notatum)* (FAC).

The area defined as Access Road was observed to be non-wet. This area is an elevated road and levee that an for both for containing water for crawfish production and for access. Vegetation is heavily managed by routine cutting, and no trees were observed within this area. The herb stratum had herbaceous plants with a wetland indicator status of FACU or FAC. Dominant vegetative species observed within this portion of the project area included: johnson grass (*Sorghum halepense*) (FACU); bermuda grass (*Cynodon dactylon*) (FACU); and Crowngrass *(Paspalum notatum)* (FAC).

3.5 General Bank Need

The proposed Bank, through reforestation of agricultural production land to forested wetlands, is expected to restore, provide, and enhance certain biogeochemical processes including attenuation, transformation, and storage of pollutants. Wetland ecological benefits to the watershed from re-forestation include increased nesting, feeding, foraging, denning and loafing habitat functions for wetland and aquatic species through both desirable canopy re-establishment, and increased desirable native wetland vegetative cover in the ground cover and shrub/sapling strata. Through hydrological restoration, increased wetland hydroperiods will provide greater storage volumes within the Lafourche Basin, and provide increased biogeochemical and habitat benefits to aquatic species, as well as refuge during drier years within the restored depressional area.

The proposed FFMB will directly address several identified needs, which include the following:

The Coastal Wetlands Planning, Protection, and Restoration Act (CWPPRA) *Basin Plan*:

- Supporting short-term strategy is to consider site-specific, small-scale projects in all subbasins where there is a critical need for wetlands protection or restoration, or a significant opportunity for wetlands creation. In the short-term, demonstration and pilot projects must also be conducted to develop, or test methods and approaches needed for implementing long-term strategies.
- Achieving no net loss of wetlands in the basin.

The Lafourche Parish Comprehensive Resiliency Plan:

- Support and maintain existing marsh management projects in the area to maximize retention of freshwater within marshes and swamps without excessive flooding of vegetation.
- Invest in infrastructure improvements, from improved roads and levees to restored wetlands.
- Restore the region's natural hydrologic function, where possible.
- Preserve wetlands and areas along bayous and other waterways.

Coastal Protection and Restoration Authority of Louisiana: Louisiana's Comprehensive Master Plan for a Sustainable Coast (2017).

- Promote a sustainable coastal ecosystem by harnessing the natural processes of the system.
- Providing a sustainable long-term solution for coastal protection and restoration.

4.0 ESTABLISHMENT OF THE MITIGATION BANK

This section describes how the mitigation bank will be established, as stated in 33 CFR 332.8(d)(2) (ii); the technical feasibility of the proposed mitigation bank, as stated in 33 CFR 332.8(d)(2) (iv); and the assurance of sufficient water rights to support the long-term sustainability of the mitigation bank, as stated in 33 CFR 332.8(d)(2)(vii)(A).

4.1 Site Restoration Plan

This section provides information on the proposed soils, hydrologic, and vegetative work that was determined to be necessary for restoration and/or enhancement of the proposed site.

This Bank will provide the cumulative re-establishment of 9.9 acres of BLH, the rehabilitation of 103 acres of BLH, and 2 acres upland restoration in the Barataria Basin watershed (HUC 08090301). The current and proposed habitat types, proposed mitigation types, and acreages are listed in Attachment A: Table 1 & Attachment B: Figures 15 & 16. In order to achieve the goals and objectives of the Bank, and to meet all requirements stated in 33 CFR 332.8; in summary, the Sponsor will cease crawfish production, restore natural hydrology and allow for the natural recruitment of wet herbaceous plants, subsoil re-establishment and rehabilitation planting areas, reforest historical BLH habitat, restore forested habitat on upland area and chemically control invasive species within and adjacent to the mitigation bank. The Sponsor will also implement effective short-term and long-term management strategies.

4.1.1 Soils/Hydrologic Work

Over the course of the land's conversion from its natural state to managed agricultural land, modifications such as lift pumps, culverts, and levees were installed to control site hydrology. To restore this area's natural hydrology and meet the objectives of FFMB, these modifications must be removed. The Sponsor anticipates no long-term structural management requirements will be needed to assure sustained natural hydrology at FFMB. (Attachment B: Figure 12 and Attachment C).

After all crawfish production activities have ceased, and prior to seedling plantings, the Sponsor will complete the following tasks to restore natural hydrology at FFMB:

The existing owner operated lift pump and the non-operational lift pump will be removed from the Bank. There is no dirt work associated with removing these structures.

To connect FFMBs hydrology to the natural ebb and flow of the surrounding watershed the access road to the East, South, and West will be degraded to natural grade. To restore natural sheet flow to FFMB, all interior levees will be degraded to natural grade. All excess earthen fill material from levee and access road degrading will be utilized onsite as part of the restoration effort to restore natural topography to support wetland functions. This excess earthen material will be evenly spread within the Bank at a uniform thickness of approximately 0.237 feet across all re-establishment and rehabilitation areas (Attachment C: Figures 5-14). Also, all four culverts with slide gates within the interior levees and the one Northeast culvert with catch basin and slide gates within the access road will be excavated and removed from the project area (Attachment C: Figure 15 & 16).

To isolate the Bank's hydrology from the North Lafourche Levee District Drainage canal and lift pump the Sponsor will remove the three culverts with catch basin and slide gates

within the northern access road. After water control structures are removed the excavated material will be placed back to re-construct the access road north of the Bank boundary (Attachment C: Figure 17).

All re-establishment and rehabilitation areas will have the soils mechanically prepared to receive vegetative plantings (Attachment C: 19 & 21). Subsoiling using a ripping implement will be used at a depth of 18 inches to alleviate soil compaction and encourage air and water pore space for root growth (Allen et al). Soil preparation has been shown to significantly increase reforestation success in BLH restoration (Lockhart et al).

After the restoration of hydrology, the Bank's hydrology will be driven by direct precipitation, surface runoff, high water tables, and tidal flooding. Hydrological restoration of FFMB will re-establish wetland hydrology to 9.9 acres of BLH and rehabilitate the wetland hydrology of 103 acres of BLH by restoring natural sheet flow and connecting these once isolated areas to the ebb and flow of the regional hydrology (Attachment D). After construction is completed, FFMB will contain 2 acres of upland restoration over the 5' contour. Many objectives will be achieved by the hydrologic restoration of the project area. The restoration will increase surface-water retention time for vegetative nutrient uptake and sedimentation. Also, localized and downstream water quality will improve by removing agriculture activities. Restoration would also restore natural hydrologic cycling and flood storage which would inundate soils and return them to their natural historic hydric process (Attachment B: Figure 14).

4.1.2 Vegetative Work

The Sponsor intends to re-establish 9.9 acres BLH and rehabilitate 103 acres of BLH by conducting tree plantings and allowing the natural recruitment of appropriate emergent species within the mitigation areas. The BLH planting will be conducted during the first planting season (December 15 to March 15) following the completion of all soils/hydrological work. The composition of BLH species was chosen to match species to the closest extent possible to those on adjacent wetlands with similar soil types. Commercial BLH species will be chosen where appropriate to tolerate the same hydrological conditions as those on the adjacent lands and according to elevations on the proposed site (Attachment B: Figure 16). All seedlings must be obtained from a registered, licensed Louisiana nursery grower. The contractor must obtain and provide to DNR/OCM certification from the contracting nursery that plant materials are of a Louisiana ecotype species and have been acclimated to Louisiana climatic and habitable conditions for at least 90 days prior to planting. Seedlings of mixed BLH species, where appropriate, will then be planted at approximately 9' X 9' spacing at a minimum initial stand density of 538 stems per acre. Hard mast species for the BLH areas shall comprise of no less than 60 percent or greater than 80 percent of the planted seedlings overall (Attachment C: 19 & 21). No individual species will represent more than 20 percent of the vegetative plantings for BLH habitat. It is important to note that the 2 acres of upland buffer restoration at FFMB will be planted with the BLH species mixture listed in (Attachment A: Table 3).

The restoration of FFMB topography and vegetative habitats is anticipated to institute the reclamation of the organic material to the system's soil and to filter sediment deposition runoff into the surrounding watershed. Also, rebuilding BLH habitats with native wetland trees and emergent species will positively affect the physical structure of the area and will restore biogeochemical processes in the soil considerably via additional plant and invertebrate detritus.

4.1.3 Noxious Plant Control

The Sponsor intends to use all prudent efforts, physical or chemical to eliminate invasive/exotic vegetation present such as Chinese tallow (*Triadica sebiferum*) at FFMB. This may include, but is not limited to, spray on application by helicopter as well as hand spraying by ground field crews. If needed aerial or ground application of annual/perennial grasses and broadleaf weeds herbicides will be used to effectively reduce competition for planted seedlings.

In addition, the Sponsor will control these undesirable/exotic species as part of the maintenance and monitoring plan. Monitoring for exotic and invasive species will occur annually and control techniques will be implemented as needed to sustain long-term undesirable/exotic species presence to 3 percent per acre or less. The Sponsor will also control undesirable/exotic species along the access road north of the Bank boundary.

4.2 Technical Feasibility

The construction work required to develop the Bank is routine in nature and feasible. The mitigation activities involve primarily reforestation using bare-root seedlings. These activities have long been utilized in wetland restoration and mitigation projects and are proven methods. The Sponsor has the necessary funds and personnel to successfully implement the proposed vegetative plantings. A more specific examination of the technical restoration methods is presented in Section 4.0 of this Prospectus.

4.3 Current Site Risk

At this time there are no right-of-ways/servitudes, liens, or oil and gas leases within the Bank boundary. The landowner Family Farms Investments, LLC currently has a mortgage on the property which will be made subordinated to the Mitigation Banking Instrument (MBI). A title opinion and survey plat will be provided with the anticipated Draft MBI submittal. North of Bank boundary The North Lafourche Levee District has control and authority of the northern levee and the drainage ditch north of this levee as part of their force drainage system. The lands and canals/ditches on the east, south and west side of the Bank are owned by other parties not connected with the Bank. There is no known existing and/or proposed development adjacent to the Bank. A review of the Louisiana Department of Natural Resources (LDNR) Strategic Online Natural Resources Information System (SONRIS) revealed no current or previous oil and gas well locations on FFMB (Attachment B: Figure 9).

4.4 Long-Term Sustainability of the Site

Due to its location and project design, the proposed Mitigation Bank has a very high likelihood of success. FFMB will be restored to the types of communities that were historically present in the project area. Long-term viability and sustainability of FFMB will be ensured through active annual monitoring, adaptive management, invasive species control, and long-term maintenance. The natural hydrologic and landscape processes that have been altered for agriculture/aquaculture production will be reversed by a hydrological connection to the natural ebb and flow of the Barataria Basin System, tying FFMB to this region’s natural hydrologic processes. No weirs or structures will be required to maintain the FFMB post-restoration hydrologic regime, so structural maintenance will not be an issue. Similarly, the reliance on the system’s natural versus engineered hydrology will ensure that the restored habitats are subject to a regionally-appropriate, natural hydro-period. A long-term management plan will be included within the mitigation banking instrument. It will detail a long-term management plan and the associated costs, as well as identify a funding mechanism in accordance with 33 CFR 332.7(d).

5.0 PROPOSED SERVICE AREA

Due to FFMB location within the Barataria Basin, the Sponsor suggests the primary service area be the Barataria Basin. The Barataria Basin is made up of the East Central Louisiana Coastal (HUC: 08090301). This service area will provide offsets for unavoidable impacts to wetlands and "Waters of the United States". Use of FFMB beyond this area will be determined by the CEMVN on a case by case basis (Attachment B: Figure 17).

6.0 OPERATION OF THE MITIGATION BANK

This section describes how the proposed Bank will be operated, as required by 33 CFR 332.8(d)(2)(ii), and provides details on the proposed ownership arrangements and long-term management strategy for the mitigation bank, as required by 33 CFR 332.8(d)(2) (v).

6.1 Project Representatives

6.1.1 Sponsor and Operations Manager

JMB Partnership, LLC
203 Main Street
Franklin, Louisiana 70538
(337) 828-7090
POC: Russell Walters
(337) 522-7207
russell@jmbcompanies.com

6.1.2 Landowner

Family Farms Investments, L.L.C.
1593 Highway 304
Thibodaux, LA 70301
POC: Jerry Rivet & Steven Scrivner
(985) 665-9826

6.2 Qualifications of the Sponsor

The Sponsor, JMB Partnership, LLC is a subsidiary of the JM Burguieres Co., Limited, which is a family legacy partnership established in 1877. The Sponsor has 141 years of land management experience in Louisiana, Texas, and Florida that includes mitigation banking, sugarcane production, and cattle ranching. The Sponsor's established mitigation banking business currently manages seven mitigation banks in Louisiana: Cypremort-Teche, Cypress Creek, Bee Bayou, Kilgore Plantation, Marine Bayou, Nabours "No Hope", Cedar Grove, and Bull Island Mitigation Bank and two in Florida: Lake Wales Ridge Conservation Bank and Kissimmee Ridge Wetland Mitigation Bank. JMB has a qualified technical staff that has multiple years of experience in wetland science, land management, and permitting.

6.3 Proposed Long-Term Ownership and Management Representatives

Family Farms Investments, L.L.C will own the property encompassing the 114.9 acre FFMB. JMB Partnership, LLC will serve as the mitigation service provider (Sponsor) and the long-term steward of FFMB. The Implementation as a mitigation bank (i.e.

Conservation Servitude filing and implementation of the mitigation work plan) will be completed by the Sponsor.

6.4 Site Protection

Pursuant to the Louisiana Conservation Servitude Act, R.S. 9:1271 et seq., a perpetual conservation servitude will be placed on the 114.9 acre FFMB. This servitude will be held by a conservation-oriented 501(c)(3) organization to be determined. The conservation servitude will be binding to and run with the title of the property. This conservation servitude will prohibit activities that would reduce the quality and quantity of the restored/enhanced wetlands, such as clear cutting, the discharge of fill, construction activities, cattle grazing, or other agricultural activities.

The servitude will also specify permissive activities such as hunting, fishing, recreational use, and mineral exploration given that the activity does not negatively affect the functions and values of the re-established and rehabilitated wetlands.

6.5 Long-Term Strategy

A long-term maintenance and protection escrow account will provide funding for long-term boundary maintenance and site protection in accordance with 33 CFR § 332.7 (d) into perpetuity. These long-term maintenance and site protection activities will be conducted by the Sponsor. The conservation easement will protect the site from any activities that would diminish the quality of restored wetlands on the site. No structures are proposed or would be necessary to assure hydrologic or vegetative restoration.

7.0 REFERENCES

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Attachment A:

Tables and Charts

Table: 1 Mitigation Plan Summary: Proposed Mitigation and Habitat Type

Current Habitat	Proposed Habitat	Proposed Mitigation Type	Acres
Interior Levees (non-wet) & Access Road (non-wet).	Bottomland Hardwoods	Re-Establishment	9.9
Aquaculture Production Pond/Crawfish Pond (wet).	Bottomland Hardwoods	Rehabilitation	103
		Total BLH Habitat:	**112.9**
Access Road (non-wet).	Hardwoods	Upland Restoration	2
		Total Upland Buffer:	**2**

Subtotal Mitigation Acreage: **112.9**
Subtotal Non-Mitigation Acreage: **2**

TOTAL MITIGATION BANK ACREAGE: **114.9**

Table 2: NRCS Soil Survey of Lafourche Parish, Louisiana Data

NRCS Soil Survey of Lafourche Parish, Louisiana					
Map Unit Symbol	Soil Name	Natural Drainage	Water Table Depth	Hydric Rating	Acres in Project Area
Cm	Cancienne silt loam, 0 to 1 % slopes	Somewhat poorly drained	18" to 48"	1 to 32%	27.2
Sk	Schriever clay, 0 to 1 % slopes	Poorly drained	0"	66 to 90%	83.6
W	Water	–	–	–	4.1

Table 3: Representative BLH Species Suitable for FFMB:

Tree Species to be Planted in BLH & Upland Restoration Areas				
Scientific name	Common Name	Hard mast/ Soft mast	Wetland Indicator Status	Composition
Quercus phellos	willow oak	Hard mast	FACW	<20%
Quercus lyrata	overcup oak	Hard mast	FACW	<20%
Quercus texana	nuttall oak	Hard mast	FACW	<20%
Quercus michauxii	swamp chestnut oak	Hard mast	FACW	<20%
Quercus nigra	water oak	Hard mast	FAC	<20%
Carya illinonsis	pecan	Hard mast	FACU	<20%
Carya aquatica	bitter pecan	Hard mast	OBL	<20%
Celtis laevigata	sugarberry	Soft mast	FACW	<15%
Diospyros virginiana	common persimmon	Soft mast	FAC	<15%
Liquidambar styraciflua	sweetgum	Soft mast	FAC	<15%
Fraxinus pennsylvanica	green ash	Soft mast	FACW	<15%
Taxodium distichum	cypress	Soft mast	OBL	<15%

LOUISIANA WETLAND RAPID ASSESSMENT METHOD (LRAM) 2.0

CEMVN Acct #	MVN-2016-00228-MG				Bank Name				
Acres Mitigation	112.9				Family Farms Mitigation Bank				
Watershed Basin	Barataria								

		Area 1	Area 2	Area 3	Area 4	Area 5	Area 6	Area 7	Area 8
Mitigation Factors	Mitigation Type	Re-Est	Rehab	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here
		6.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0
	Management	None	None	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Negative Influences	Low	Low	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here
		-0.5	-0.5	0.0	0.0	0.0	0.0	0.0	0.0
	Size	500 : 100	500 : 100	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Buffer / Upland	Restored	Restored	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here
		0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0
	Sum:	6.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0
	Area:	9.9	103.0	0.0					
	Sum x Area Affected:	59.4	515.0	0.0	0.0	0.0	0.0	0.0	0.0

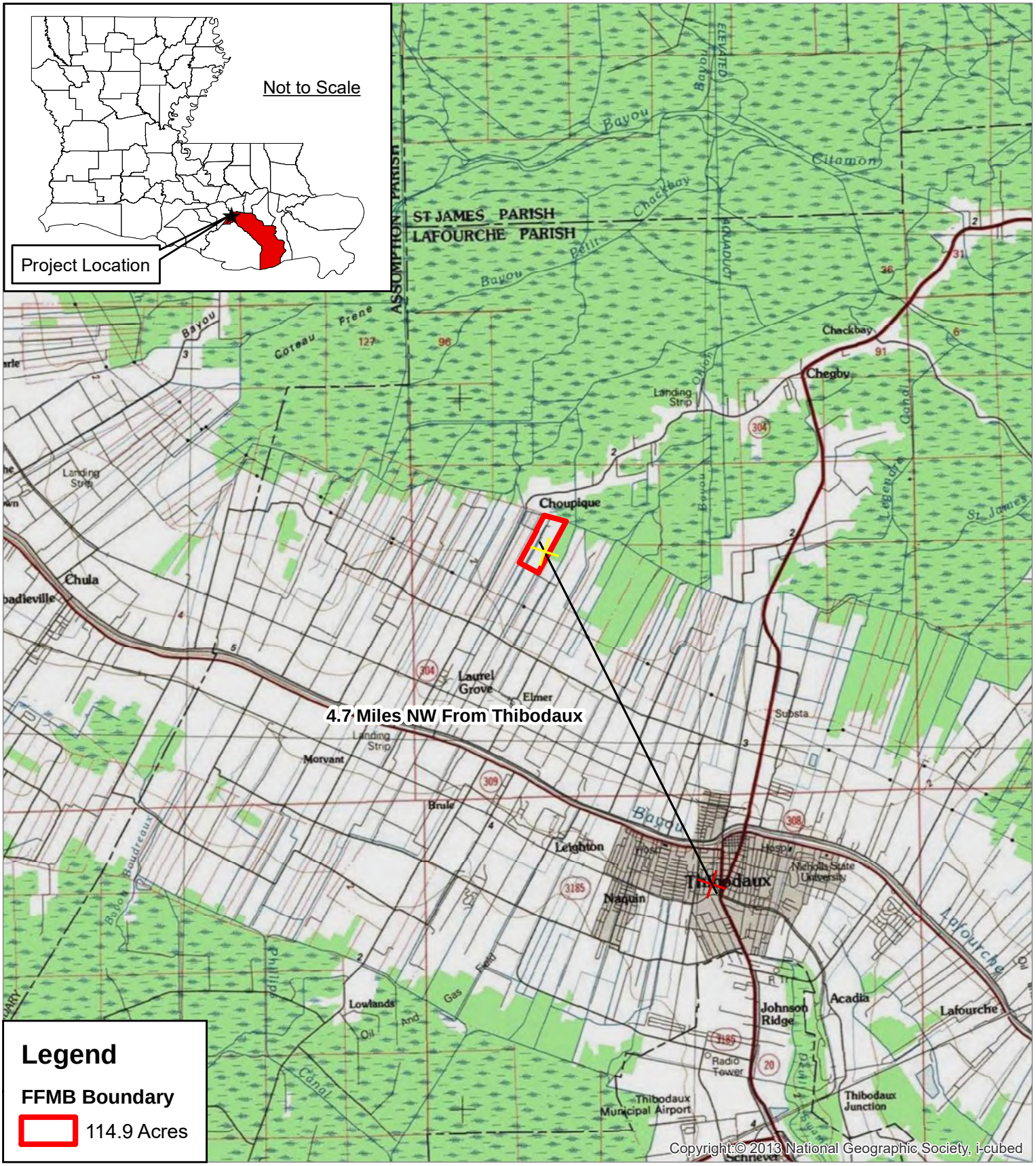
∑ Mitigation:	574.4
Mitigation Potential:	5.1

COMMENTS

Mitigation Type	Bottomland Hardwood
Management	
Negative Influences	
Size	
Buffer/Upland	2 acres of Upland Buffer Restoration

Attachment B:

Maps and Exhibits



0 1 2 3 4

Miles 1 inch = 2 miles

PROPOSED FAMILY FARMS MITIGATION BANK

VICINITY EXHIBIT

LAFOURCHE PARISH,LA

Coord Sys: NAD 1983 2011 StatePlane Louisiana South FIPS 1702 Ft US **Date:** 11/22/2019

Vertical Datum: NAVD88 Feet **Author:** KCK

FIGURE 01

JMB

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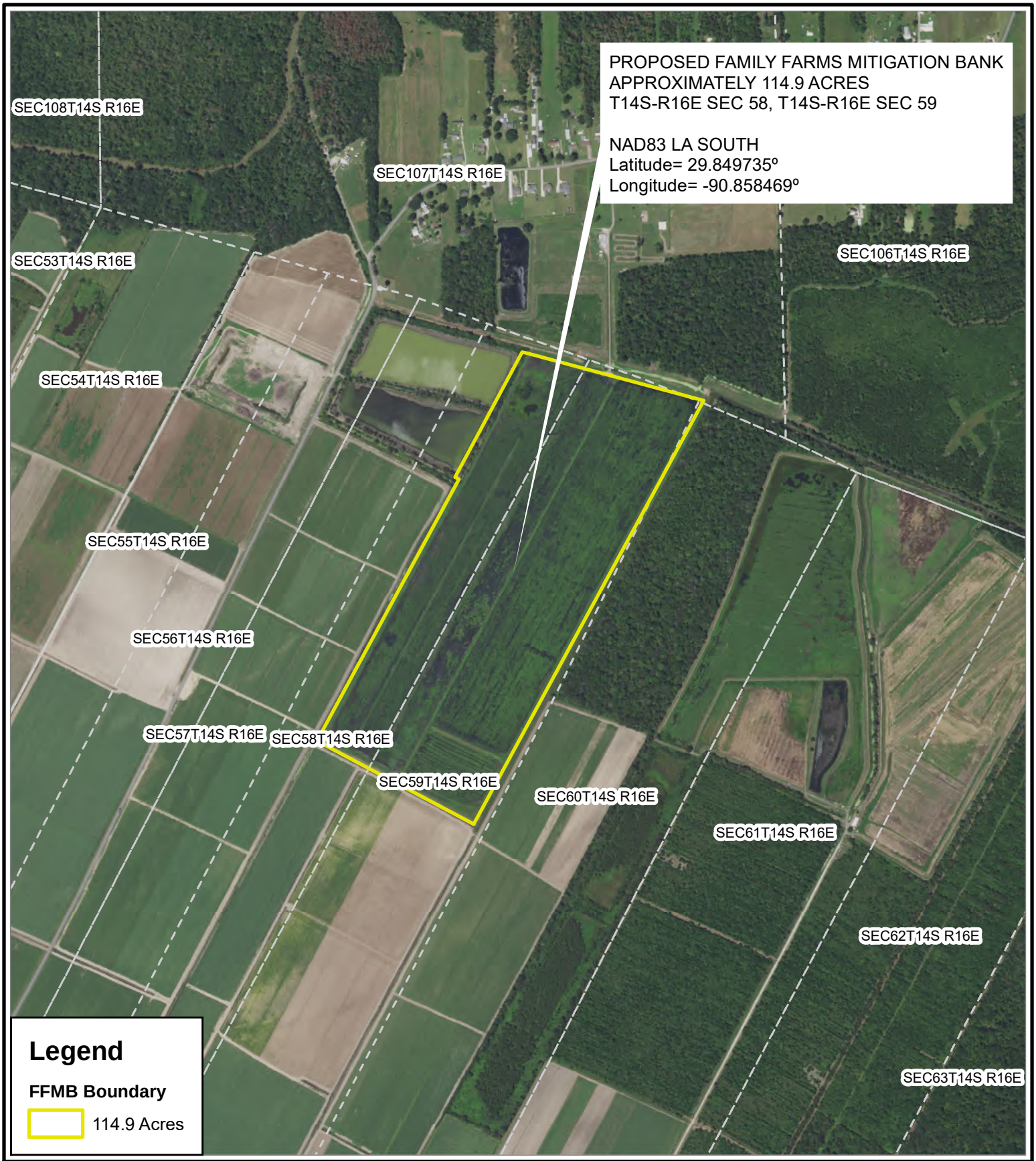

PROPOSED FAMILY FARMS MITIGATION BANK
PROJECT BOUNDARY EXHIBIT
LAFOURCHE PARISH,LA

Coord Sys: NAD 1983 2011 StatePlane Louisiana South FIPS 1702 Ft US **Date:** 11/13/2019
Vertical Datum: NAVD88 Feet **Author:** KCK

FIGURE 02

JMB

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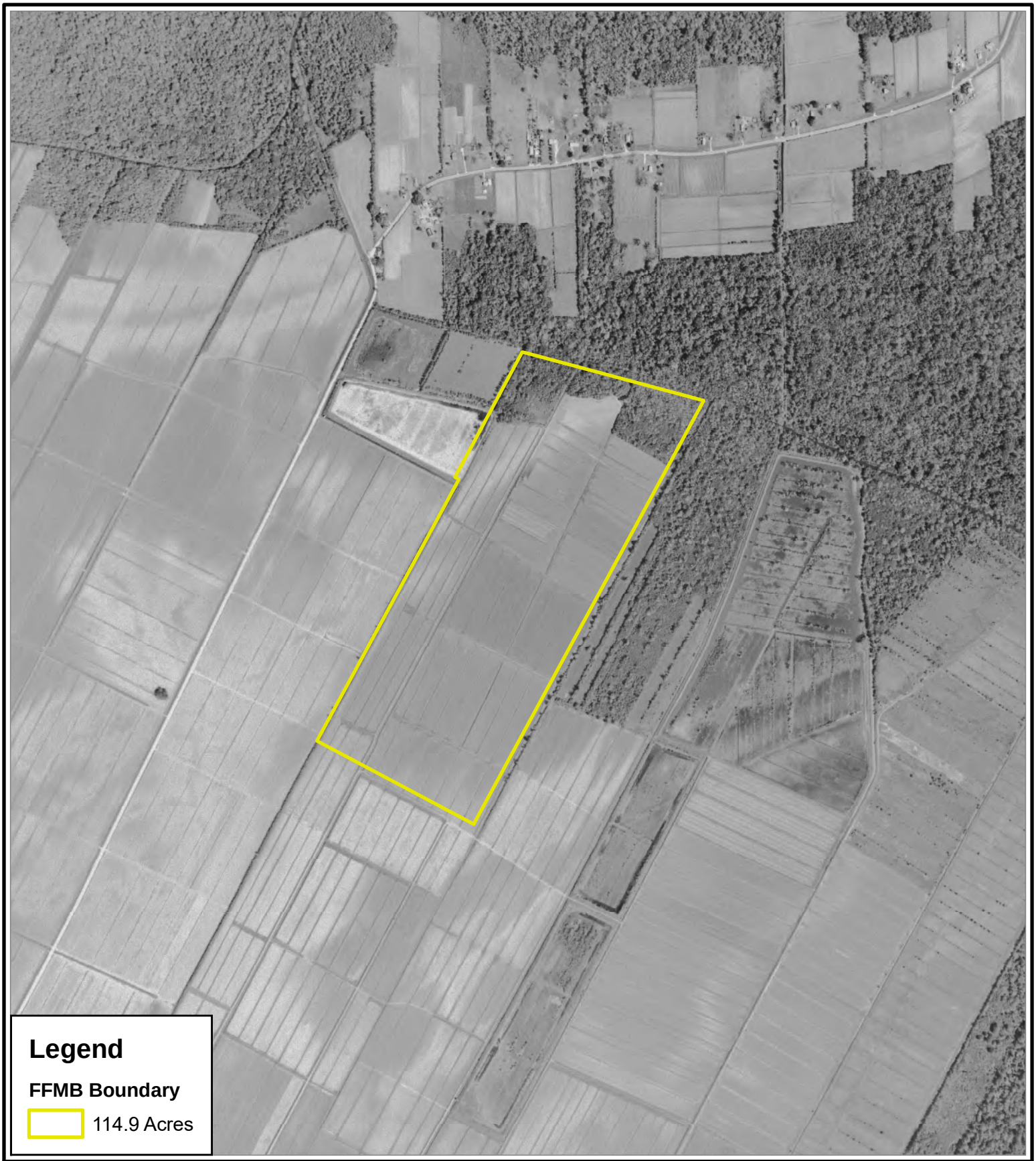

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Feet 1 in = 1,000 ft

N

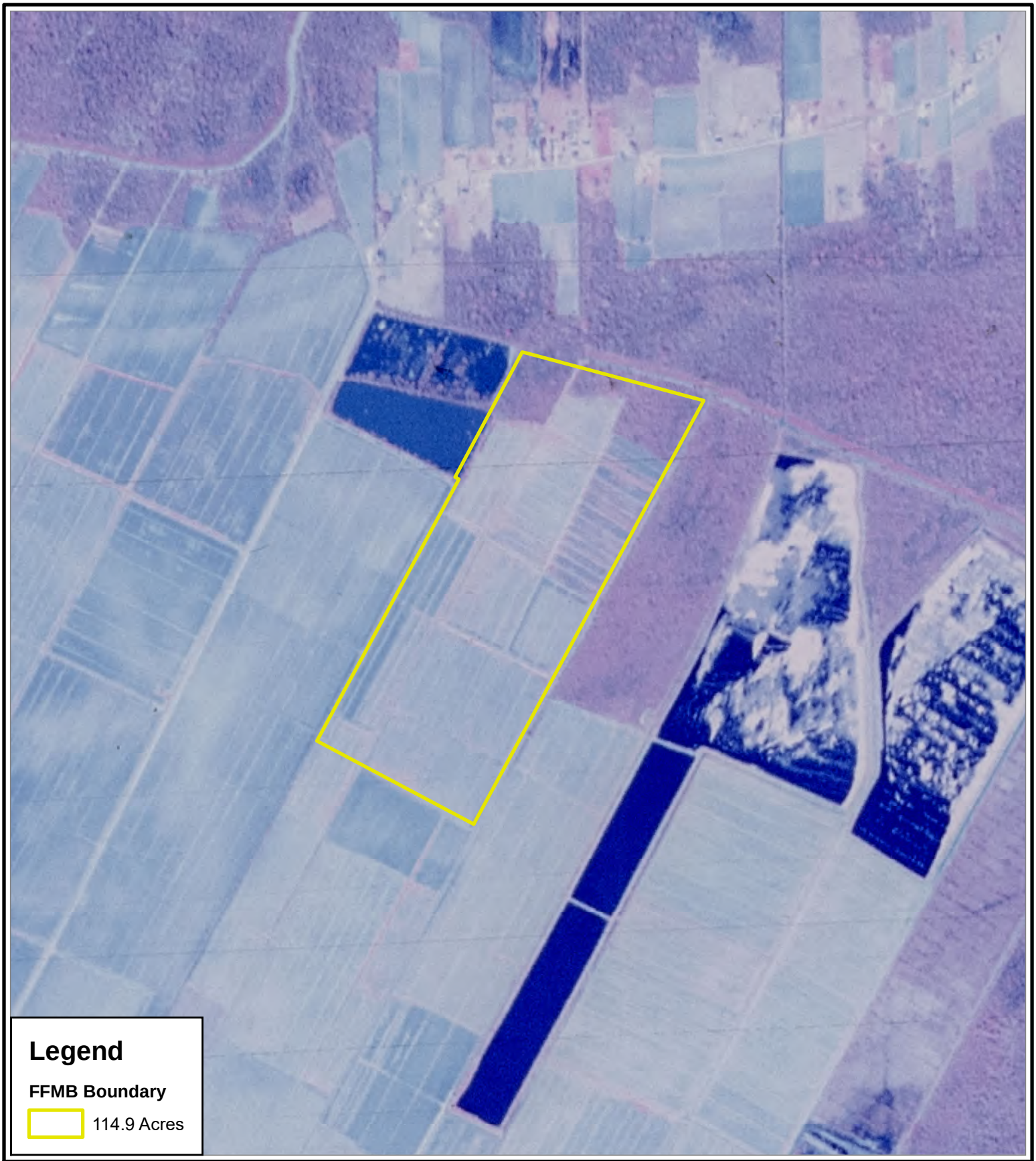
PROPOSED FAMILY FARMS MITIGATION BANK
1961 AERIAL IMAGERY EXHIBIT
LAFOURCHE PARISH,LA

Coord Sys: NAD 1983 2011 StatePlane Louisiana South FIPS 1702 Ft US **Date:** 11/25/2019
Vertical Datum: NAVD88 Feet **Author:** KCK

FIGURE 03A

JMB

Document Path: N:\Mitigation Banks\Family Farms Mitigation Bank\Mapping\GIS Projects (.MXD)\Prospectus\1.0\Figure 03_A_1961 Aerial Imagery_FFMB_09.04.2019.mxd



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Feet 1 in = 1,000 ft

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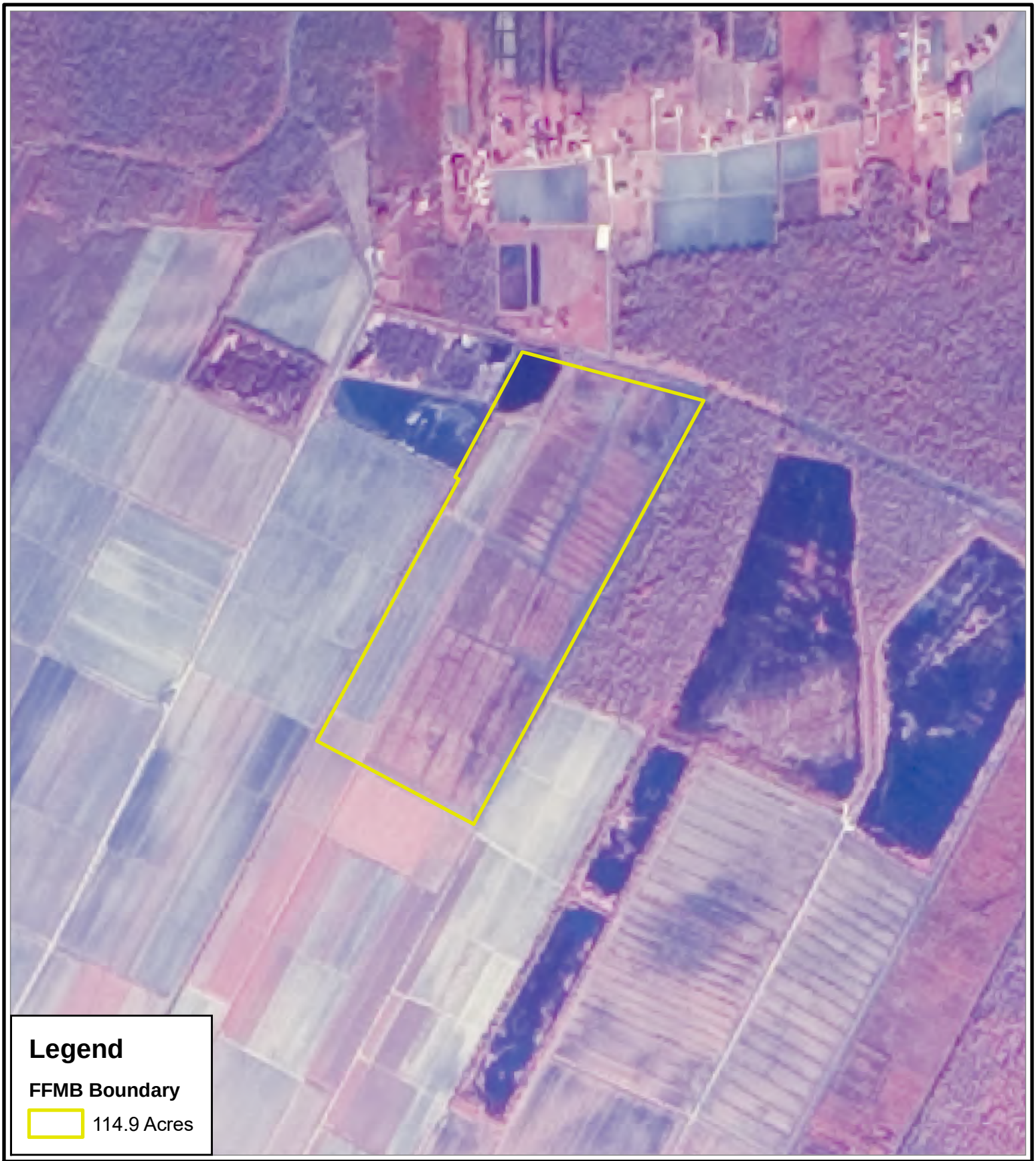
PROPOSED FAMILY FARMS MITIGATION BANK
1972 AERIAL IMAGERY EXHIBIT
LAFOURCHE PARISH,LA

Coord Sys: NAD 1983 2011 StatePlane Louisiana South FIPS 1702 Ft US **Date:** 11/25/2019
Vertical Datum: NAVD88 Feet **Author:** KCK

FIGURE 03B

JMB

Document Path: N:\Mitigation Banks\Family Farms Mitigation Bank\Mapping\GIS Projects (.MXD)\Prospectus\1.0\Figure 03_B_1972 Aerial Imagery_FFMB_09.04.2019.mxd



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Feet 1 in = 1,000 ft

N

PROPOSED FAMILY FARMS MITIGATION BANK

1985 AERIAL IMAGERY EXHIBIT

LAFOURCHE PARISH,LA

Coord Sys: NAD 1983 2011 StatePlane Louisiana South FIPS 1702 Ft US **Date:** 11/25/2019

Vertical Datum: NAVD88 Feet **Author:** KCK

FIGURE 03C

JMB

Document Path: N:\Mitigation Banks\Family Farms Mitigation Bank\Mapping\GIS Projects (.MXD)\Prospectus\1.0\Figure 03_C_1985 Aerial Imagery_FFMB_09.04.2019.mxd

0 500 1,000 1,500 2,000
Feet 1 in = 1,000 ft

N

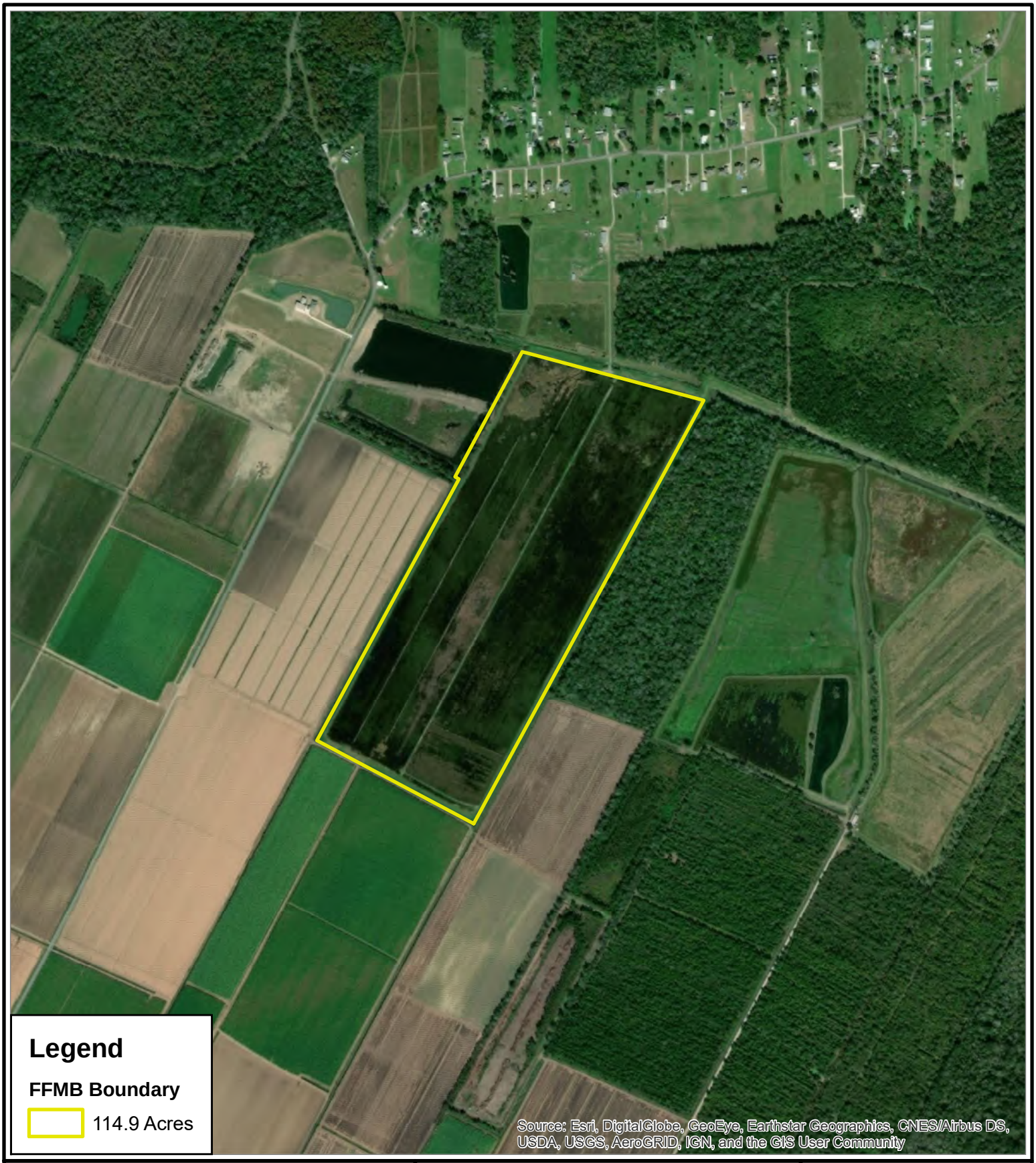
PROPOSED FAMILY FARMS MITIGATION BANK
1998 AERIAL IMAGERY EXHIBIT
LAFOURCHE PARISH,LA

Coord Sys: NAD 1983 2011 StatePlane Louisiana South FIPS 1702 Ft US **Date:** 11/25/2019
Vertical Datum: NAVD88 Feet **Author:** KCK

FIGURE 03D

JMB

Document Path: N:\Mitigation Banks\Family Farms Mitigation Bank\Mapping\GIS Projects (.MXD)\Prospectus\1.0\Figure 03_D_1998 Aerial Imagery_FFMB_09.04.2019.mxd



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Feet 1 in = 1,000 ft

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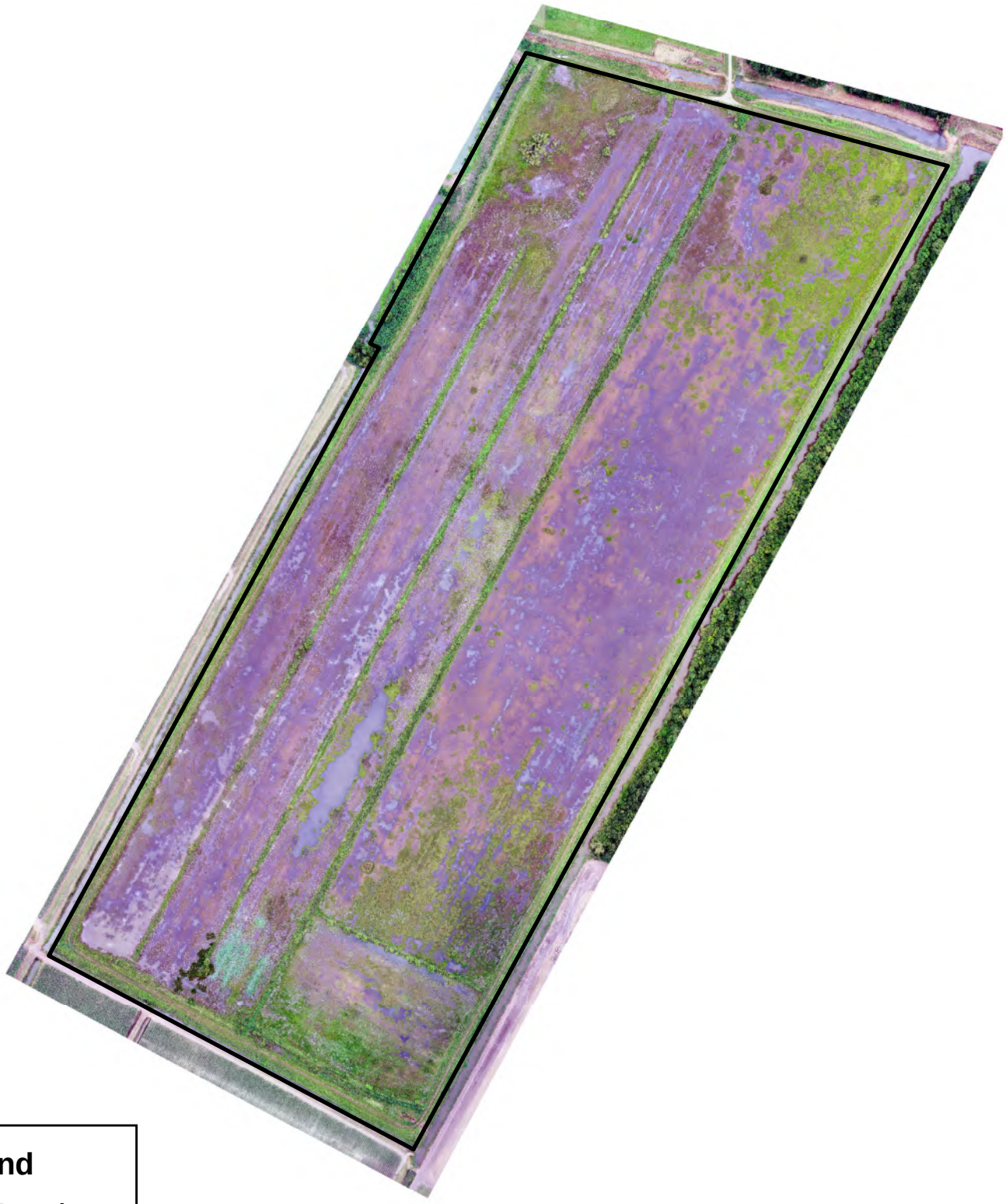
PROPOSED FAMILY FARMS MITIGATION BANK
2019 AERIAL IMAGERY EXHIBIT
LAFOURCHE PARISH,LA

Coord Sys: NAD 1983 2011 StatePlane Louisiana South FIPS 1702 Ft US **Date:** 11/25/2019
Vertical Datum: NAVD88 Feet **Author:** KCK

FIGURE 03E

JMB

Document Path: N:\Mitigation Banks\Family Farms Mitigation Bank\Mapping\GIS Projects (.MXD)\Prospectus\1.0\Figure 03_E_2019_BASEMAP Aerial Imagery_FFMB_09.04.2019.mxd



Legend

FFMB Boundary

114.9 Acres

0 250 500 750 1,000

Feet *1 in = 500 ft*

N

PROPOSED FAMILY FARMS MITIGATION BANK

2019 DRONE IMAGERY EXHIBIT

LAFOURCHE PARISH,LA

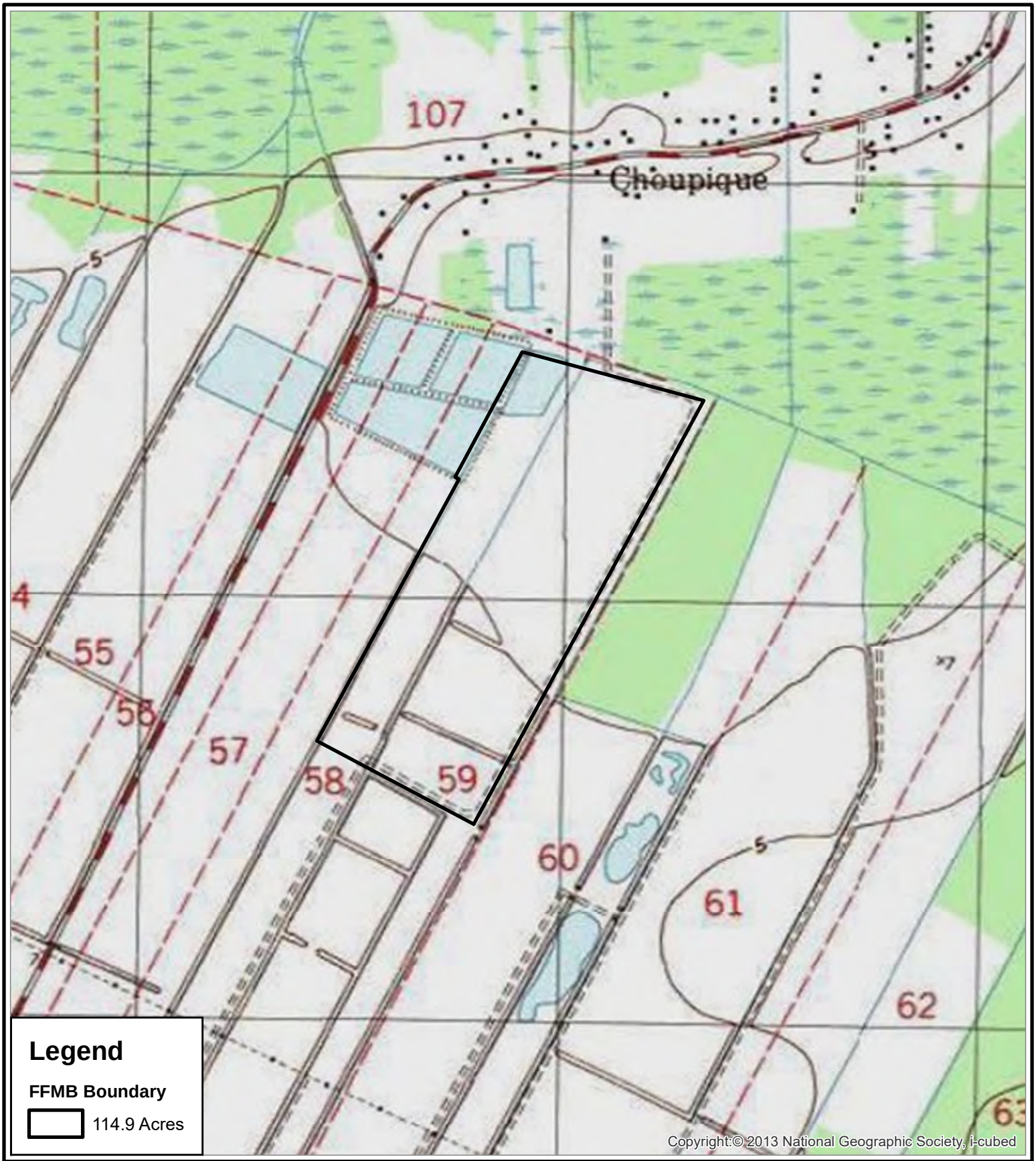
Coord Sys: NAD 1983 2011 StatePlane Louisiana South FIPS 1702 Ft US **Date:** 11/25/2019

Vertical Datum: NAVD88 Feet **Author:** KCK

FIGURE 03F

JMB

Document Path: N:\Mitigation Banks\Family Farms Mitigation Bank\Mapping\GIS Projects (.MXD)\Prospectus\1.0\Figure 03_F_2019_Aerial Imagery_DRONE_FFMB_09.04.2019.mxd



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Feet 1 in = 1,000 ft

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PROPOSED FAMILY FARMS MITIGATION BANK
USGS 7.5 MINUTE QUADRANGLE EXHIBIT
LAFOURCHE PARISH,LA

Coord Sys: NAD 1983 2011 StatePlane Louisiana South FIPS 1702 Ft US **Date:** 11/25/2019
Vertical Datum: NAVD88 Feet **Author:** KCK

FIGURE 03G

JMB

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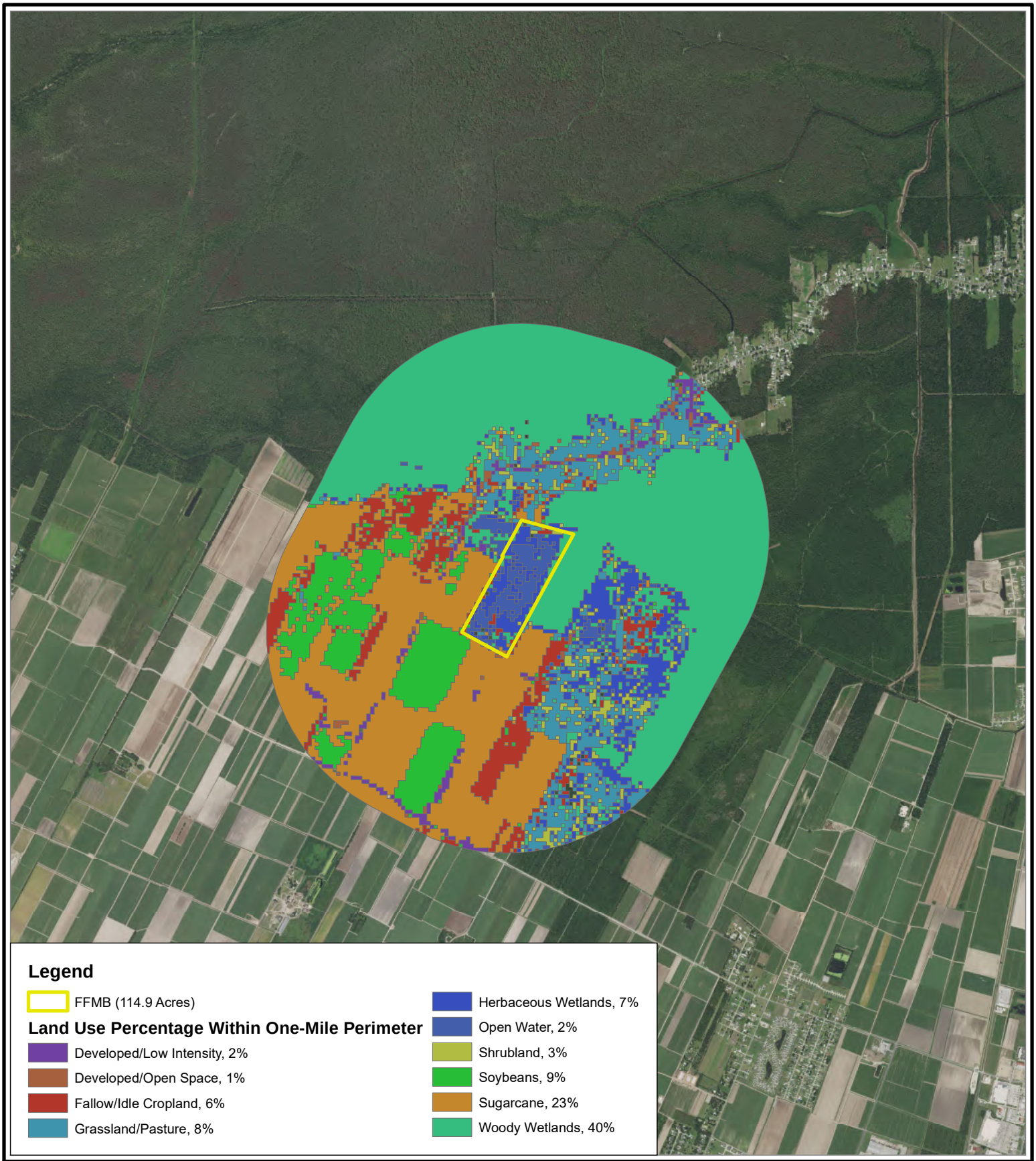

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Feet

1 in = 4,000 ft

PROPOSED FAMILY FARMS MITIGATION BANK

LAND USE EXHIBIT

LAFOURCHE PARISH, LA

Coord Sys: WGS 1984 Web Mercator Auxiliary Sphere	**Date:** 11/25/2019
Vertical Datum: NAVD88 Feet	**Author:** KCK

FIGURE 04

JMB

Document Path: N:\Mitigation Banks\Family Farms Mitigation Bank\Mapping\GIS Projects (.MXD)\Prospectus\1.0\Figure 04_Land Use_Exhibit_FFMB_09.09.2019.mxd

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Feet 1 in = 500 ft

Proposed Family Farms Mitigation Bank

NRCS SOILS EXHIBIT

LAFOURCHE PARISH, LA

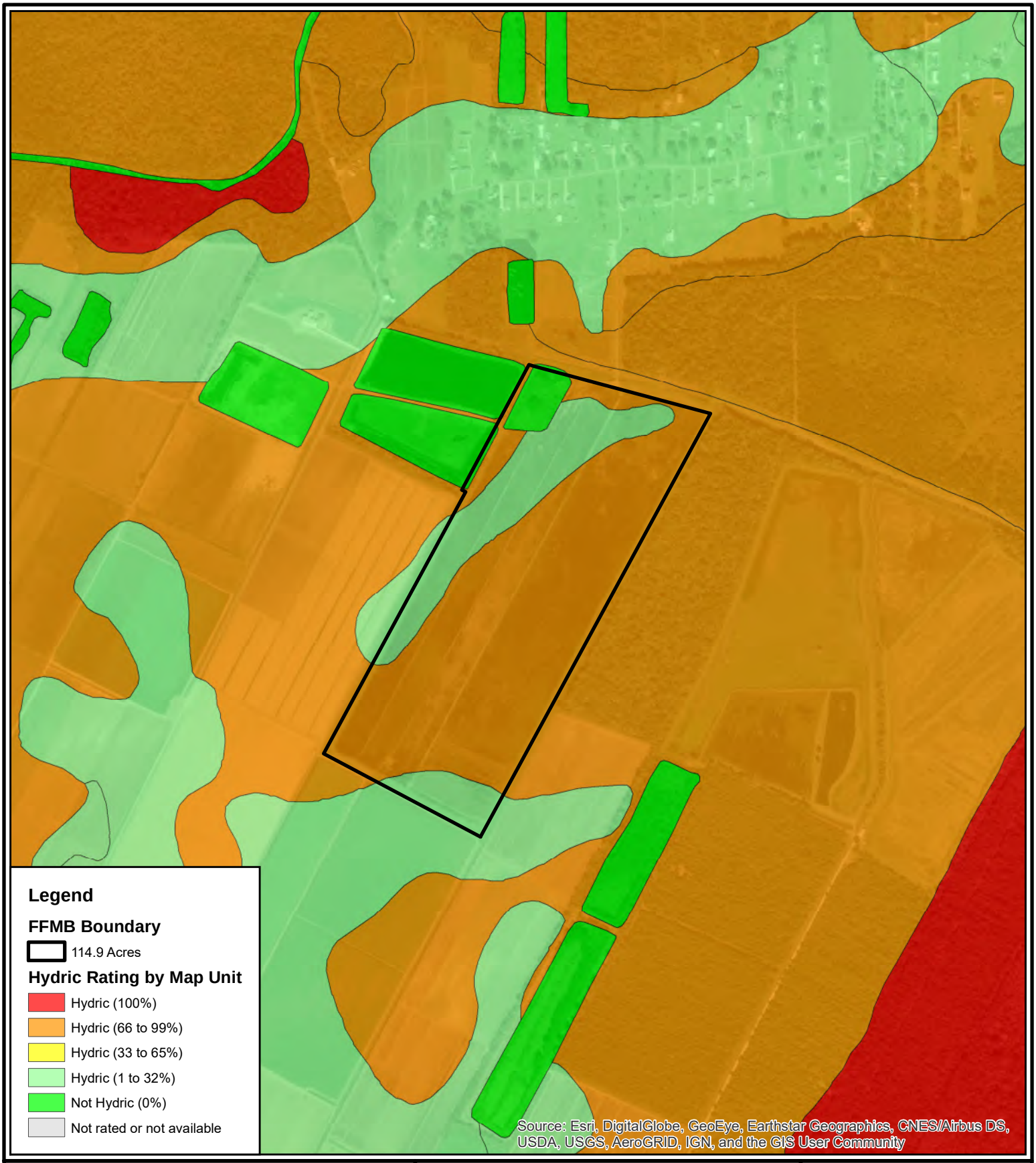
Coord Sys: NAD 1983 2011 StatePlane Louisiana South FIPS 1702 Ft US **Date:** 11/25/2019

Vertical Datum: NAVD88 Feet **Author:** KCK

FIGURE 05

JMB

Document Path: N:\Mitigation Banks\Family Farms Mitigation Bank\Mapping\GIS Projects (.MXD)\Prospectus\1.0\Figure 05_NRCS_soils_Exhibit_FFMB_09.09.2019.mxd



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Feet *1 in = 1,000 ft*

PROPOSED FAMILY FARMS MITIGATION BANK

HYDRIC RATING EXHIBIT

LAFOURCHE PARISH, LA

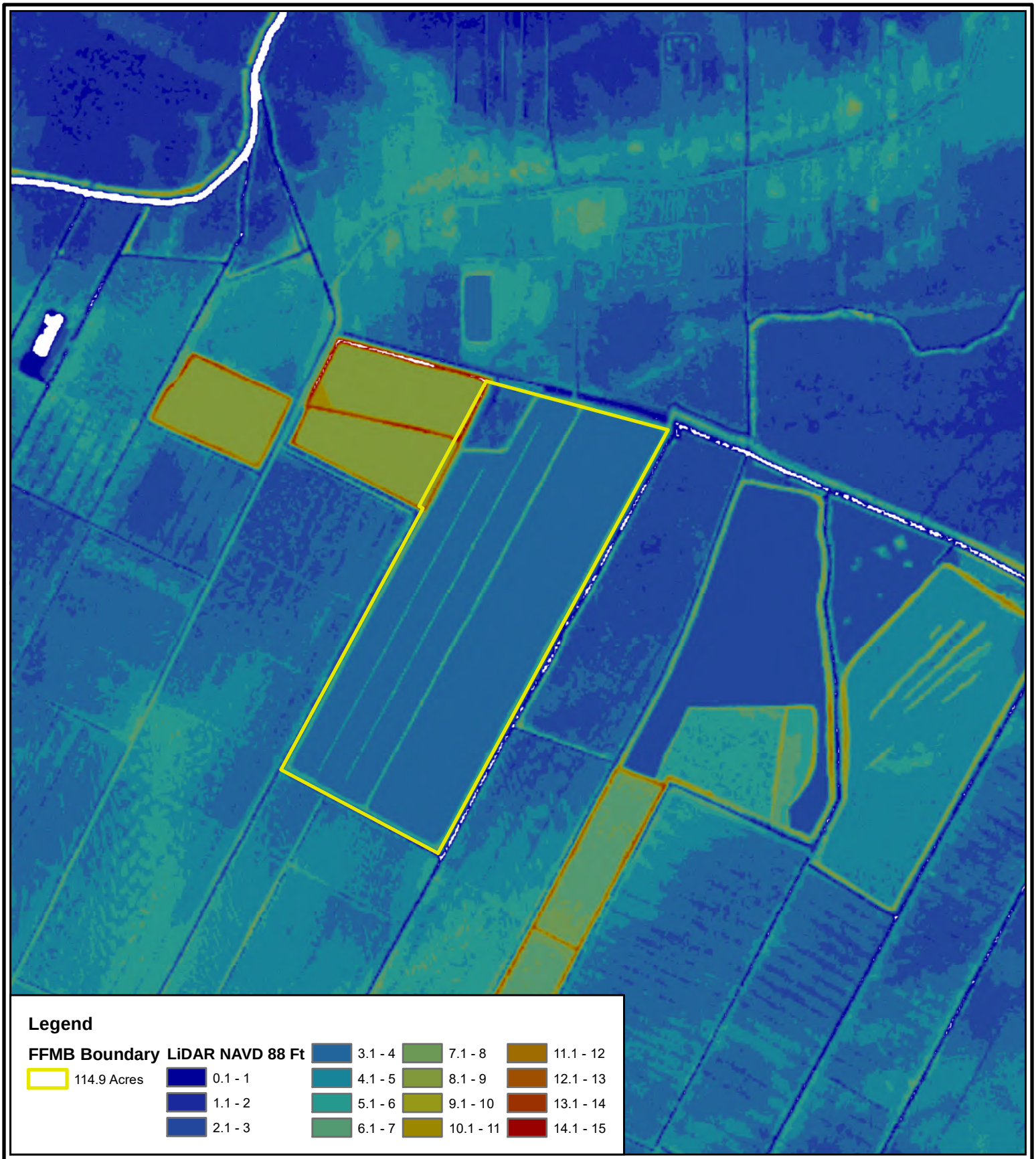
Coord Sys: NAD 1983 2011 StatePlane Louisiana South FIPS 1702 Ft US **Date:** 11/05/2019

Vertical Datum: NAVD88 Feet **Author:** KCK

FIGURE 06

JMB

Document Path: N:\Mitigation Banks\Family Farms Mitigation Bank\Mapping\GIS Projects (.MXD)\Prospectus\1.0\Figure 06_Hydric_Rating_Exhibit_FFMB_09.09.2019.mxd



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Feet *1 in = 1,000 ft*

N

PROPOSED FAMILY FARMS MITIGATION BANK

ELEVATION EXHIBIT

LAFOURCHE PARISH, LA

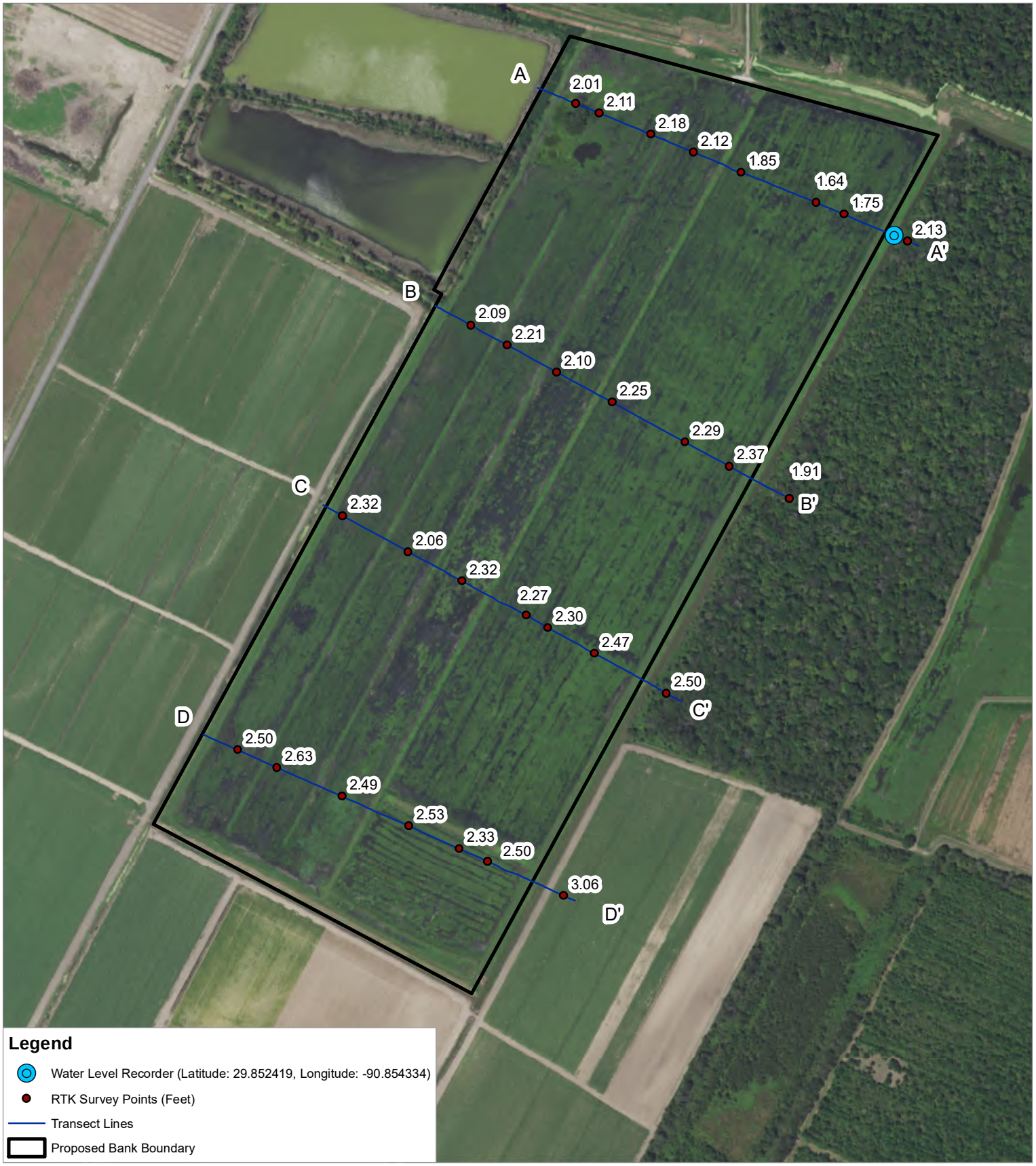
Coord Sys: NAD 1983 2011 StatePlane Louisiana South FIPS 1702 Ft US **Date:** 11/05/2019

Vertical Datum: NAVD88 Feet **Author:** KCK

FIGURE 07

JMB

Document Path: N:\Mitigation Banks\Family Farms Mitigation Bank\Mapping\GIS Projects (.MXD)\Prospectus\1.0\Figure 07_Elevation_Exhibit_FFMB_09.09.2019.mxd



The RTK Data was collected in;
-Horizontal
NAD 1983 2011 StatePlane Louisiana South
-Vertical
NAVD88 Feet

0 250 500 750 1,000
Feet
1 in = 500 ft

PROPOSED FAMILY FARMS MITIGATION BANK

RTK EXHIBIT

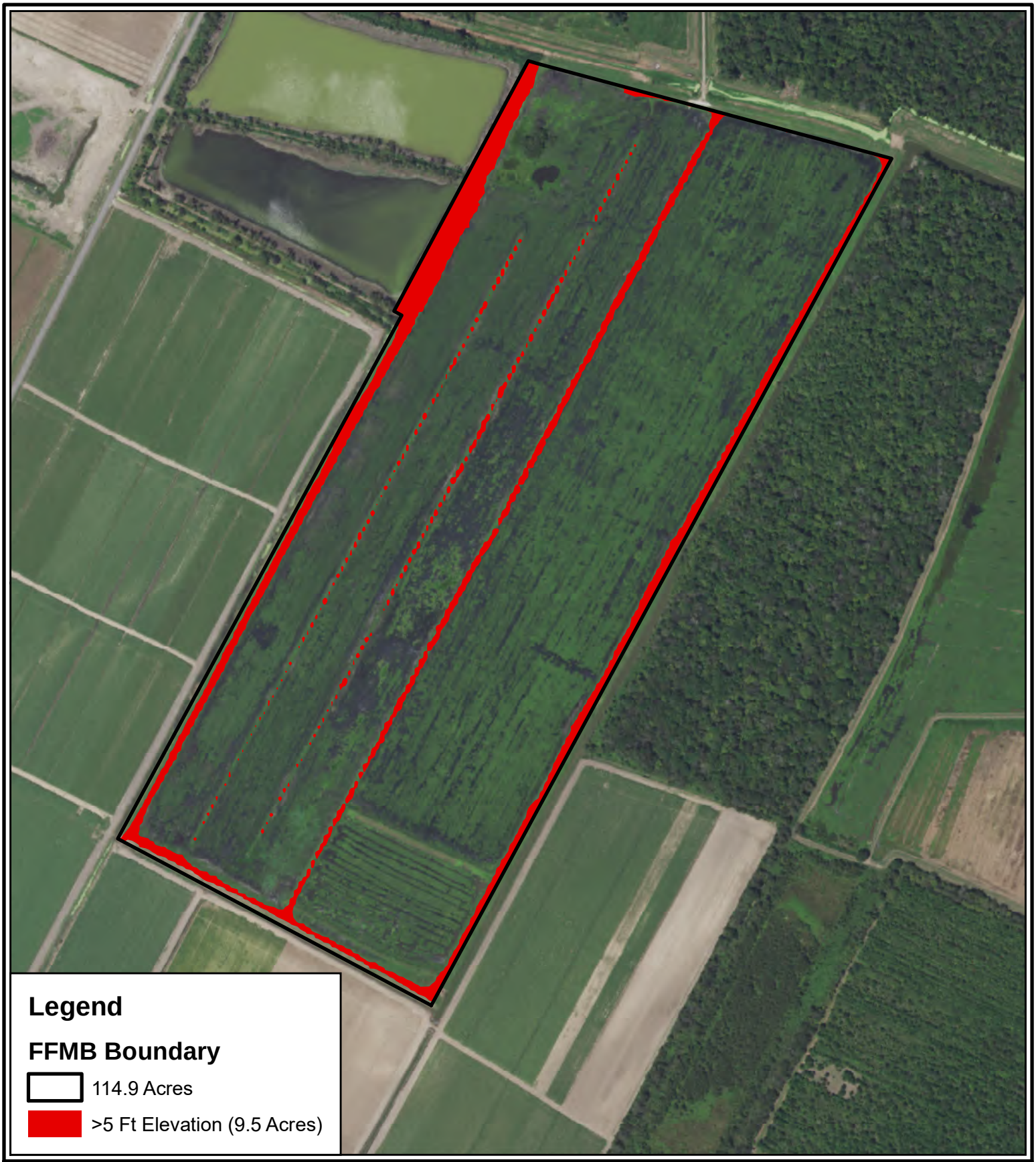
LAFOURCHE PARISH, LA

Coord Sys: NAD83 2011 Louisiana South ftUS	**Date:** 12/16/2019
Vertical Datum: NAVD88 Feet	**Author:** CTG

FIGURE 7A

JMB

Document Path: N:\Mitigation Banks\Family Farms Mitigation Bank\Mapping\GIS Projects (.MXD)\Prospectus\1.0\Figure 07_A_ FFMB_RTK_Exhibit_12.12.2019.mxd



0 250 500 750 1,000
Feet 1 in = 500 ft

N

PROPOSED FAMILY FARMS MITIGATION BANK

>5 FOOT CONTOUR EXHIBIT

LAFOURCHE PARISH, LA

Coord Sys: NAD 1983 2011 StatePlane Louisiana South FIPS 1702 Ft US **Date:** 11/25/2019
Vertical Datum: NAVD88 Feet **Author:** KCK

FIGURE 08

JMB

Document Path: N:\Mitigation Banks\Family Farms Mitigation Bank\Mapping\GIS Projects (.MXD)\Prospectus\1.0\Figure 08_5 foot contour_Exhibit_FFMB_09.09.2019.mxd

0 500 1,000 1,500 2,000

Feet 1 in = 1,000 ft

N

PROPOSED FAMILY FARMS MITIGATION BANK

EASEMENT EXHIBIT

LAFOURCHE PARISH,LA

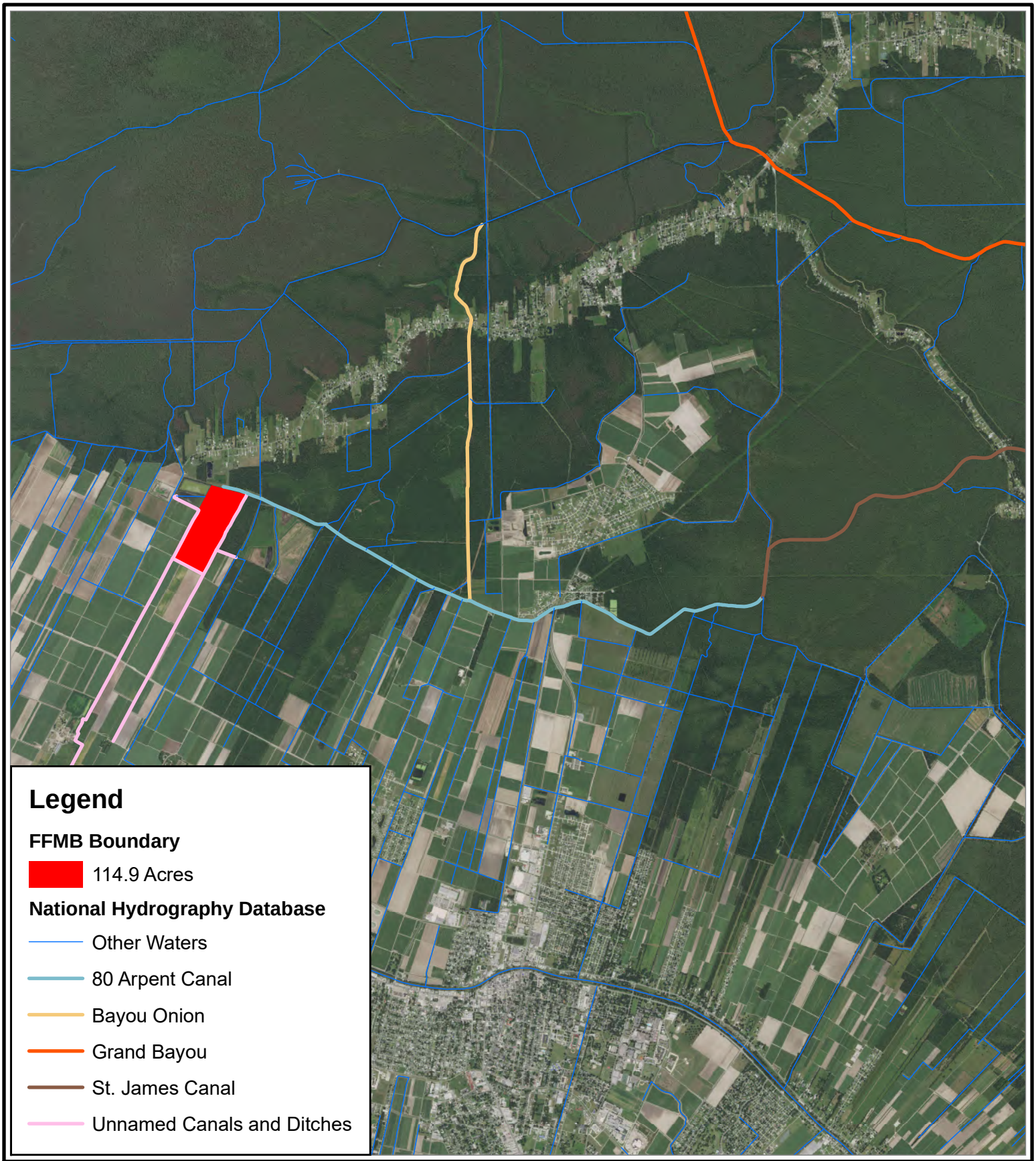
Coord Sys: NAD 1983 2011 StatePlane Louisiana South FIPS 1702 Ft US **Date:** 11/13/2019

Vertical Datum: NAVD88 Feet **Author:** KCK

FIGURE 09

JMB

Document Path: N:\Mitigation Banks\Family Farms Mitigation Bank\Mapping\GIS Projects (.MXD)\Prospectus\1.0\Figure 09_Easement Exhibit_FFMB_09.09.2019.mxd



0 3,300 6,600 9,900 13,200

Feet 1 in = 5,333 ft

N

PROPOSED FAMILY FARMS MITIGATION BANK

NATIONAL HYDROGRAPHY DATASET EXHIBIT

LAFOURCHE PARISH,LA

Coord Sys: NAD 1983 2011 StatePlane Louisiana South FIPS 1702 Ft US **Date:** 11/26/2019

Vertical Datum: NAVD88 Feet **Author:** KCK

FIGURE 10

JMB

Document Path: N:\Mitigation Banks\Family Farms Mitigation Bank\Mapping\GIS Projects (.MXD)\Prospectus\1.0\Figure 10_NHD_Exhibit_FFMB_09.09.2019.mxd

0 1.5 3 4.5 6

Miles *1 in = 3 miles*

PROPOSED FAMILY FARMS MITIGATION BANK

CONTRIBUTING DRAINAGE AREA EXHIBIT LAFOURCHE PARISH,LA

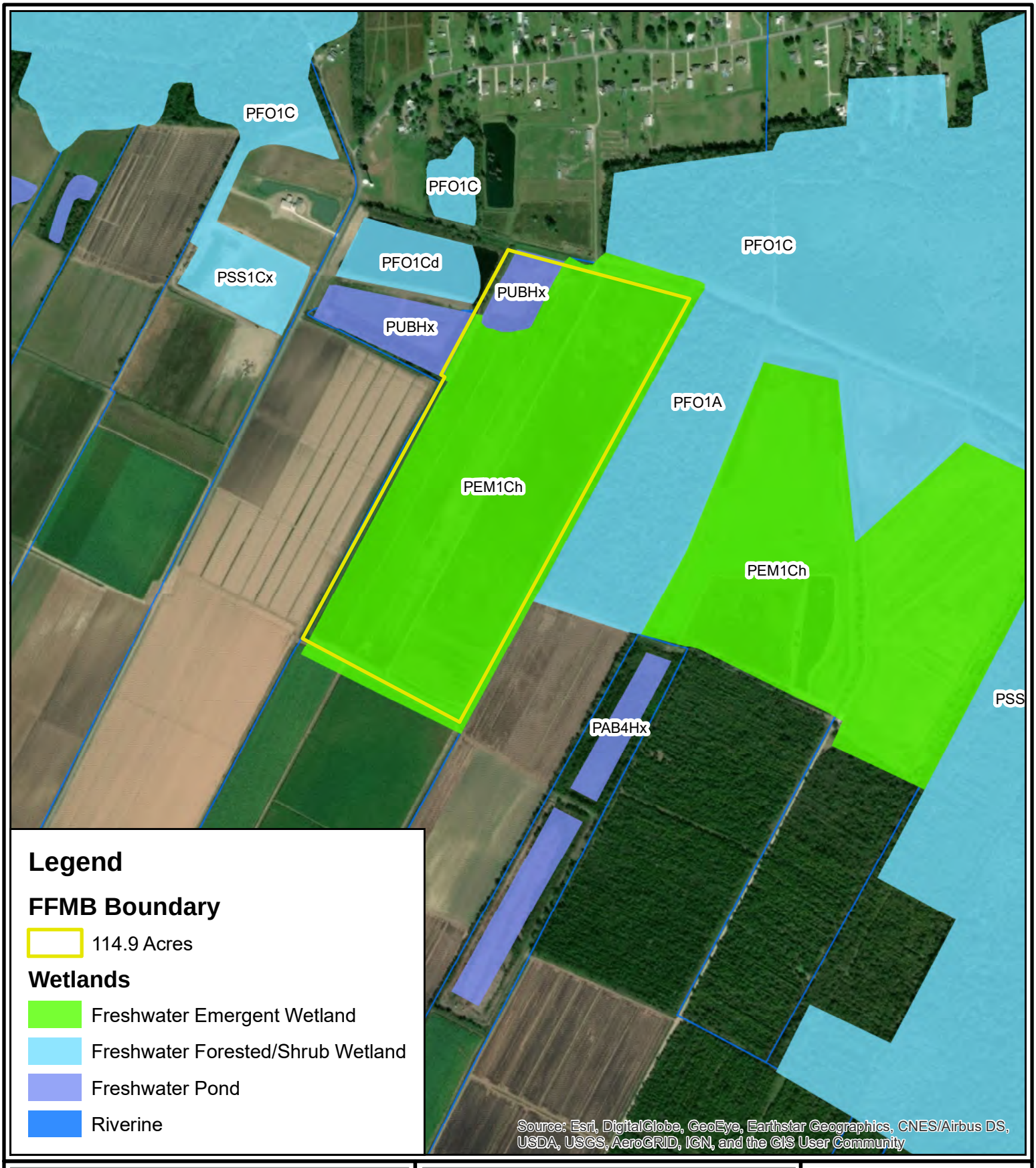
Coord Sys: NAD 1983 2011 StatePlane Louisiana South FIPS 1702 Ft US **Date:** 11/26/2019

Vertical Datum: NAVD88 Feet **Author:** KCK

FIGURE 10A

JMB

Document Path: N:\Mitigation Banks\Family Farms Mitigation Bank\Mapping\GIS Projects (.MXD)\Prospectus\1.0\Figure 10A_CONTRIBUTING DRAINAGE AREA _Exhibit_FFMB_09.09.2019.mxd



0 500 1,000 1,500 2,000

Feet 1 in = 1,000 ft

PROPOSED FAMILY FARMS MITIGATION BANK

NATIONAL WETLANDS INVENTORY EXHIBIT

LAFOURCHE PARISH, LA

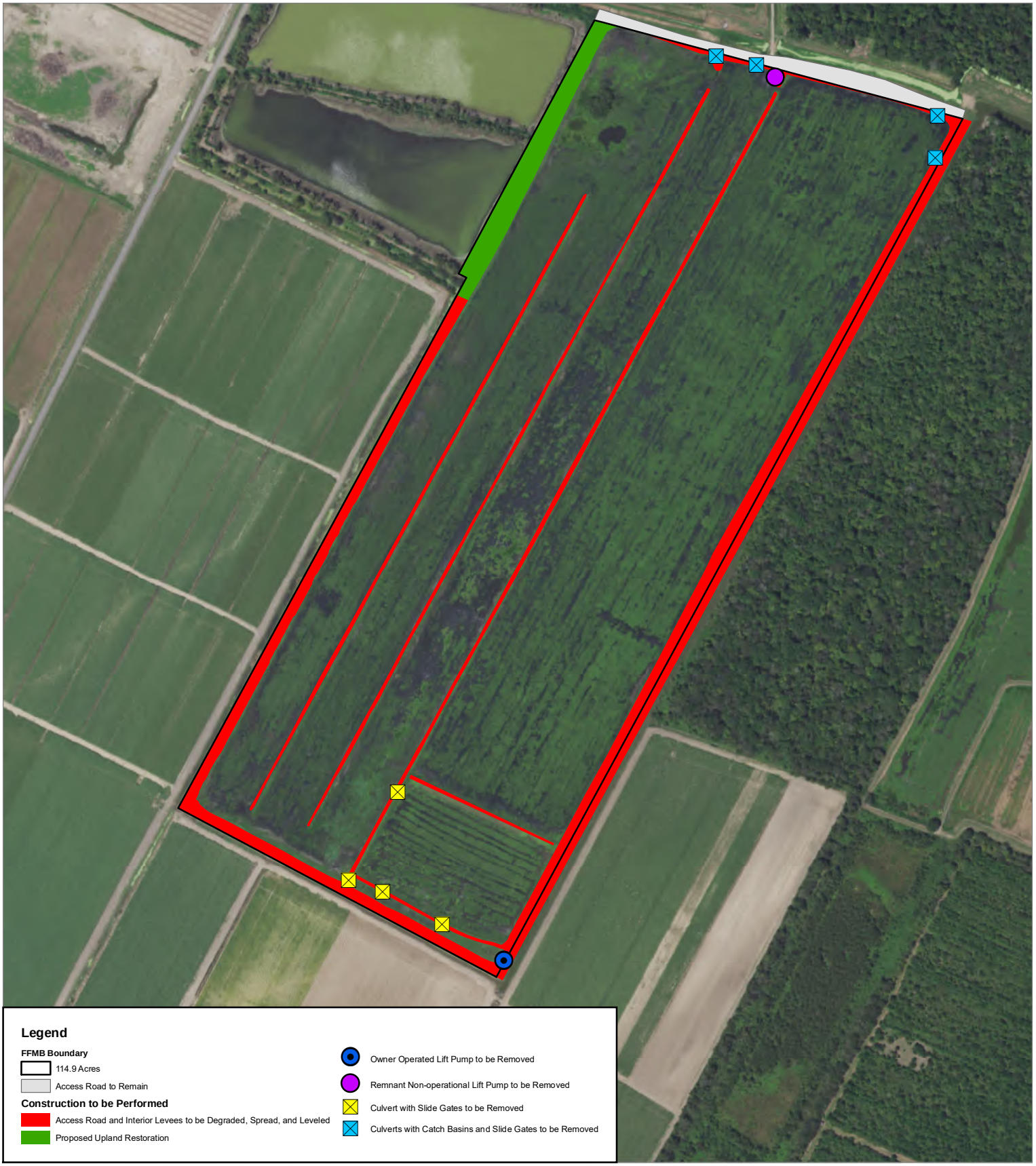
Coord Sys: NAD 1983 2011 StatePlane Louisiana South FIPS 1702 Ft US **Date:** 11/11/2019

Vertical Datum: NAVD88 Feet **Author:** KCK

FIGURE 11

JMB

Document Path: N:\Mitigation Banks\Family Farms Mitigation Bank\Mapping\GIS Projects (.MXD)\Prospectus\1.0\Figure 11_National Wetlands Inventory_Exhibit_FFMB_09.09.2019.mxd



0 250 500 750 1,000

Feet *1 in = 500 ft*

PROPOSED FAMILY FARMS MITIGATION BANK

PROPOSED CONSTRUCTION EXHIBIT

LAFOURCHE PARISH,LA

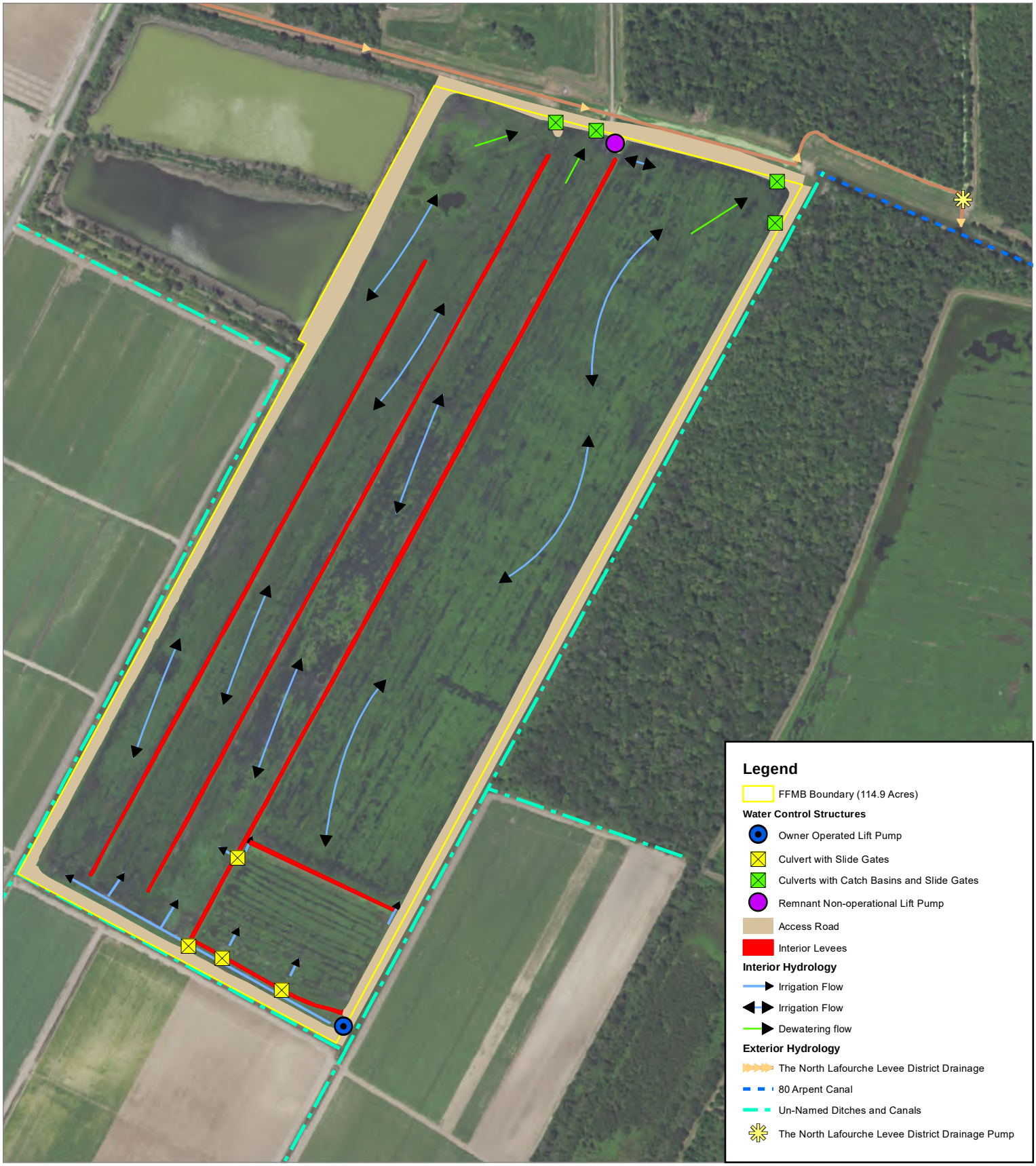
Coord Sys: NAD 1983 2011 StatePlane Louisiana South FIPS 1702 Ft US **Date:** 12/20/2019

Vertical Datum: NAVD88 Feet **Author:** KCK

FIGURE 12

JMB

Document Path: N:\Mitigation Banks\Family Farms Mitigation Bank\Mapping\GIS Projects (.MXD)\Prospectus\1.0\Figure 12_Proposed Construction_Exhibit_FFMB_09.09.2019.mxd



0 250 500 750 1,000

Feet 1 in = 500 ft

N

PROPOSED FAMILY FARMS MITIGATION BANK

CURRENT HYDROLOGY EXHIBIT

LAFOURCHE PARISH,LA

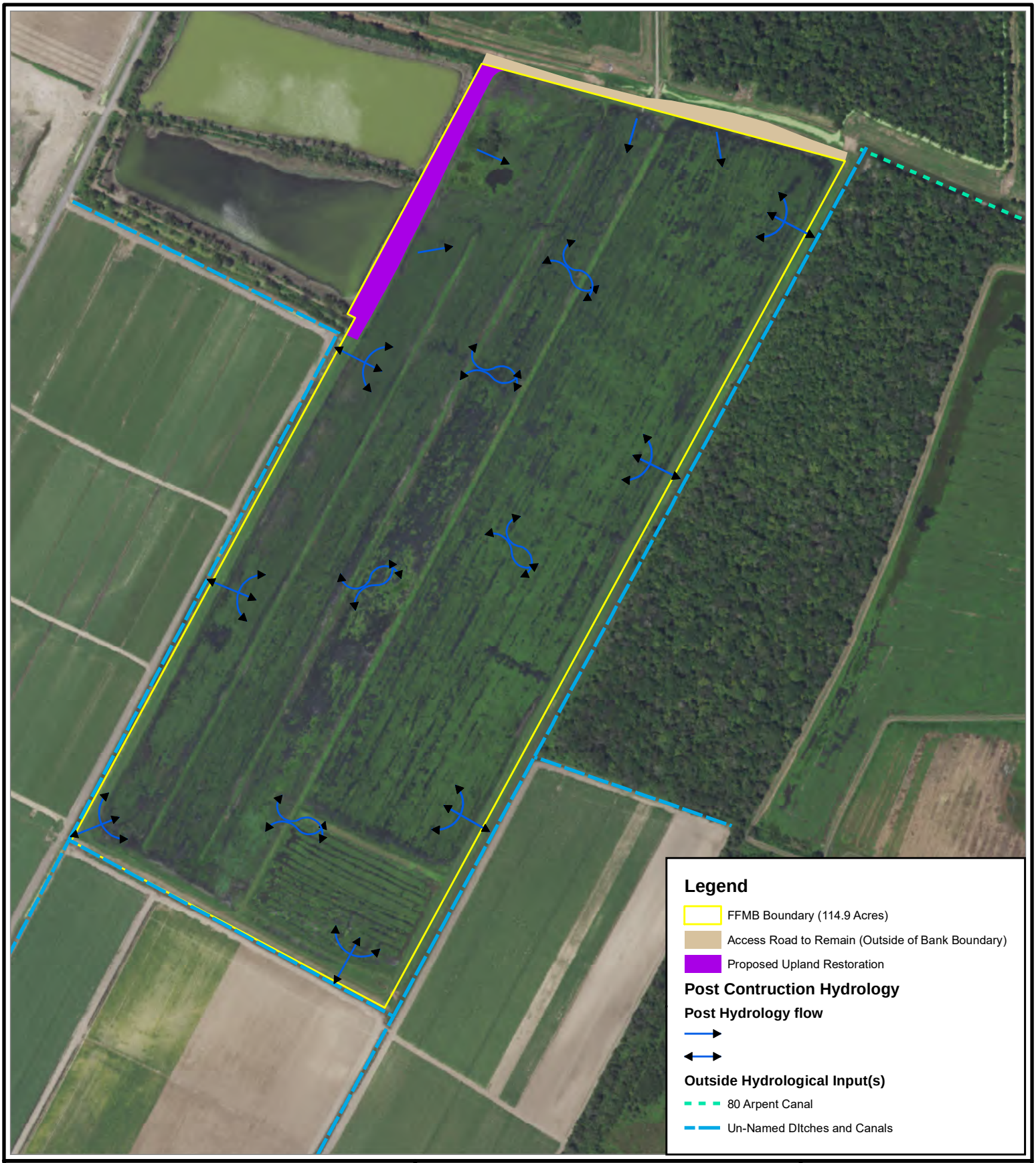
Coord Sys: NAD 1983 2011 StatePlane Louisiana South FIPS 1702 Ft US **Date:** 12/11/2019

Vertical Datum: NAVD88 Feet **Author:** KCK

FIGURE 13

JMB

Document Path: N:\Mitigation Banks\Family Farms Mitigation Bank\Mapping\GIS Projects (.MXD)\Prospectus\1.0\Figure 13_Current Hydrology_Exhibit_FFMB_09.09.2019.mxd



0 250 500 750 1,000

Feet

1 in = 500 ft

PROPOSED FAMILY FARMS MITIGATION BANK

PROPOSED HYDROLOGY EXHIBIT LAFOURCHE PARISH,LA

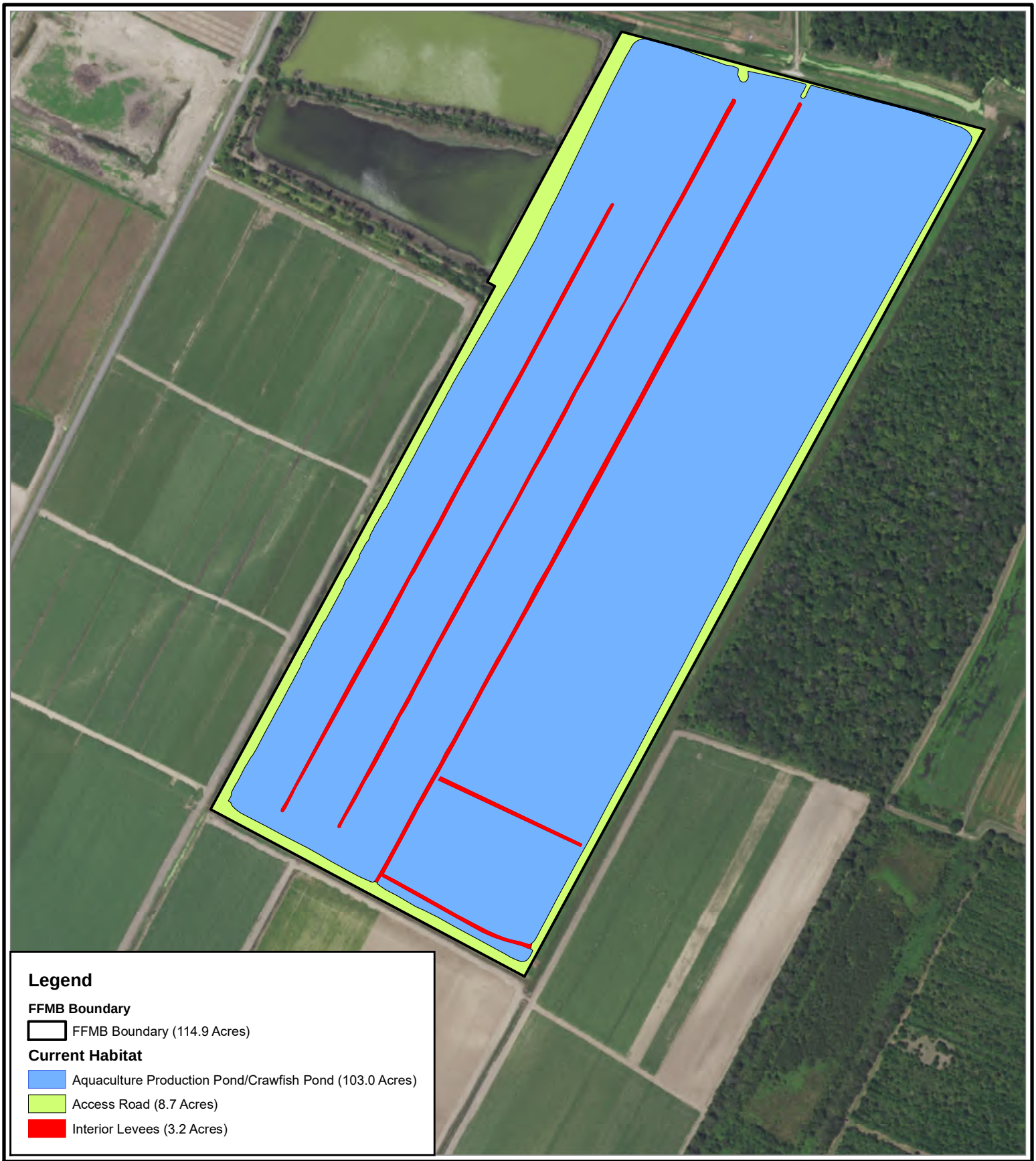
Coord Sys: NAD 1983 2011 StatePlane Louisiana South FIPS 1702 Ft US **Date:** 12/10/2019

Vertical Datum: NAVD88 Feet **Author:** KCK

FIGURE 14

JMB

Document Path: N:\Mitigation Banks\Family Farms Mitigation Bank\Mapping\GIS Projects (.MXD)\Prospectus\1.0\Figure 14_Proposed hydrology_Exhibit_FFMB_09.09.2019.mxd



0 250 500 750 1,000

Feet

1 in = 500 ft

N

PROPOSED FAMILY FARMS MITIGATION BANK

CURRENT HABITAT EXHIBIT

LAFOURCHE PARISH,LA

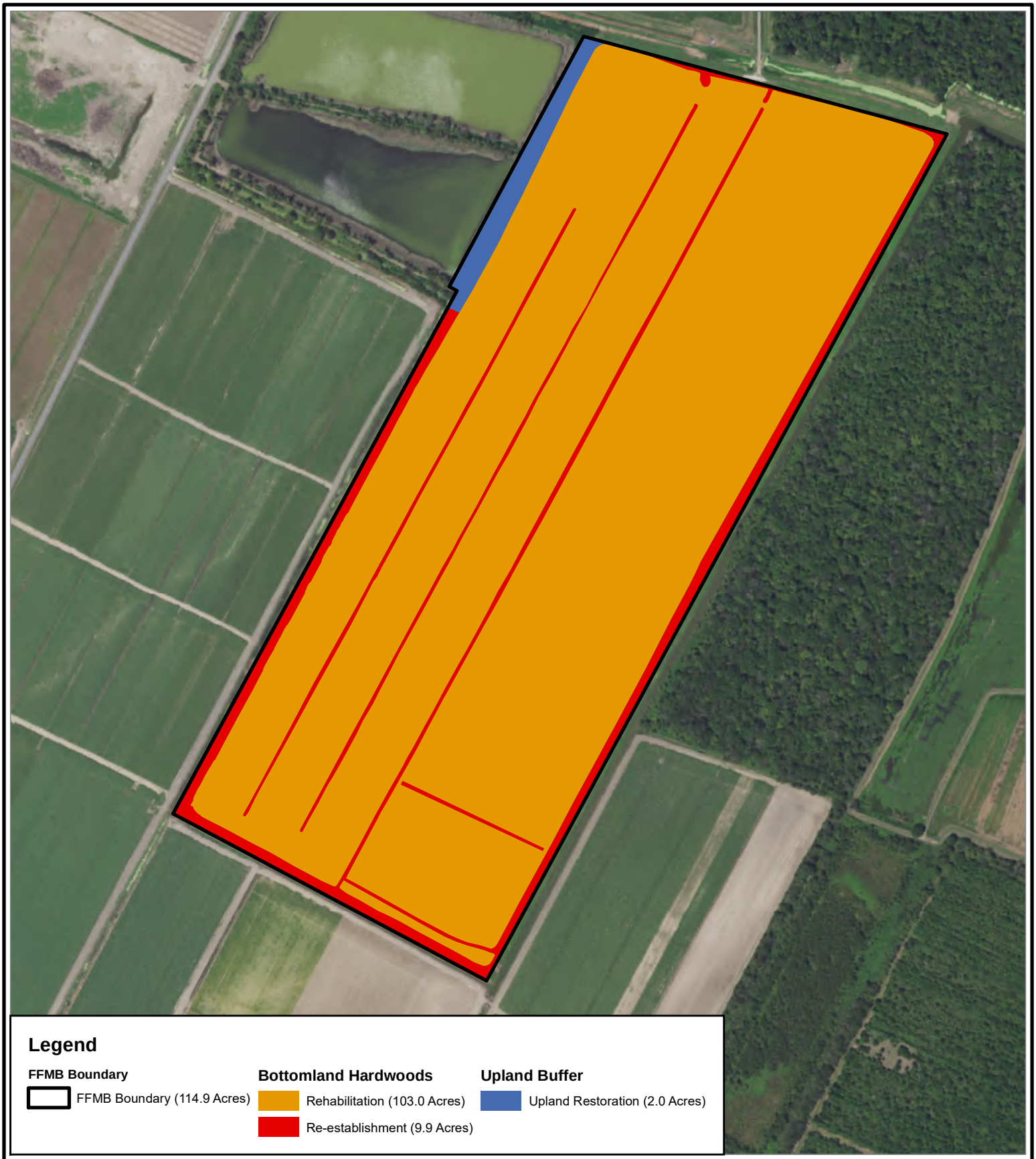
Coord Sys: NAD 1983 2011 StatePlane Louisiana South FIPS 1702 Ft US **Date:** 12/10/2019

Vertical Datum: NAVD88 Feet **Author:** KCK

FIGURE 15

JMB

Document Path: N:\Mitigation Banks\Family Farms Mitigation Bank\Mapping\GIS Projects (.MXD)\Prospectus\1.0\Figure 15_Current Habitat_Exhibit_FFMB_09.09.2019.mxd



0 250 500 750 1,000

Feet

1 in = 500 ft

N

PROPOSED FAMILY FARMS MITIGATION BANK

PROPOSED HABITAT EXHIBIT

LAFOURCHE PARISH,LA

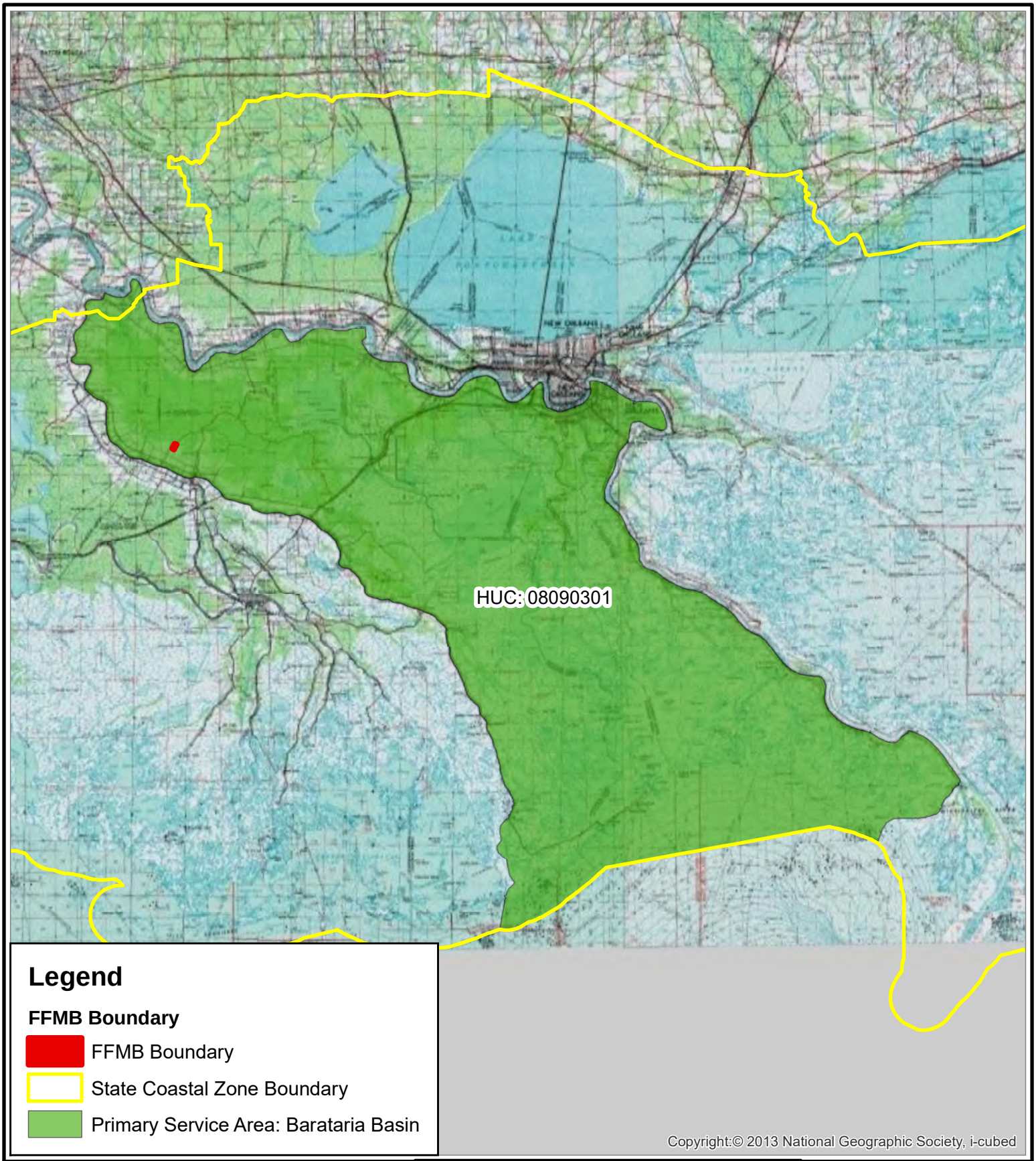
Coord Sys: NAD 1983 2011 StatePlane Louisiana South FIPS 1702 Ft US **Date:** 12/10/2019

Vertical Datum: NAVD88 Feet **Author:** KCK

FIGURE 16

JMB

Document Path: N:\Mitigation Banks\Family Farms Mitigation Bank\Mapping\GIS Projects (.MXD)\Prospectus\1.0\Figure 16_Proposed Habitat_Exhibit_FFMB_09.09.2019.mxd



PROPOSED FAMILY FARMS MITIGATION BANK

SERVICE AREA EXHIBIT

LAFOURCHE PARISH,LA

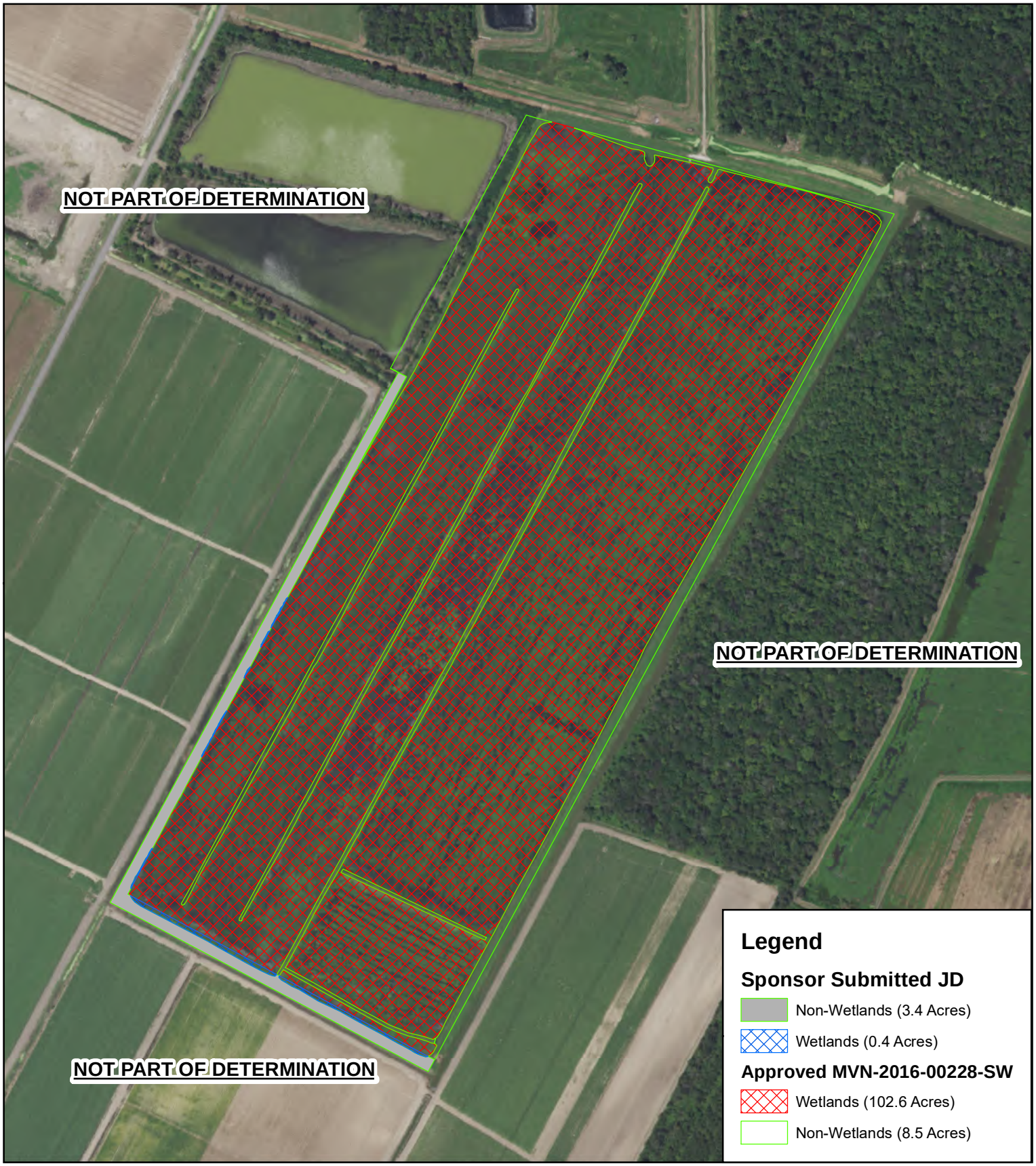
Coord Sys: NAD 1983 2011 StatePlane Louisiana South FIPS 1702 Ft US **Date:** 11/13/2019

Vertical Datum: NAVD88 Feet **Author:** KCK

FIGURE 17

JMB

Document Path: N:\Mitigation Banks\Family Farms Mitigation Bank\Mapping\GIS Projects (.MXD)\Prospectus\1.0\Figure 17_Service Area_Exhibit_FFMB_09.09.2019.mxd



0 300 600 900 1,200

Feet 1 in = 500 ft

N

PROPOSED FAMILY FARMS MITIGATION BANK

Wetlands and Uplands Within Bank Boundary

LAFOURCHE PARISH,LA

Coord Sys: NAD 1983 2011 StatePlane Louisiana South FIPS 1702 Ft US **Date:** 12/13/2019

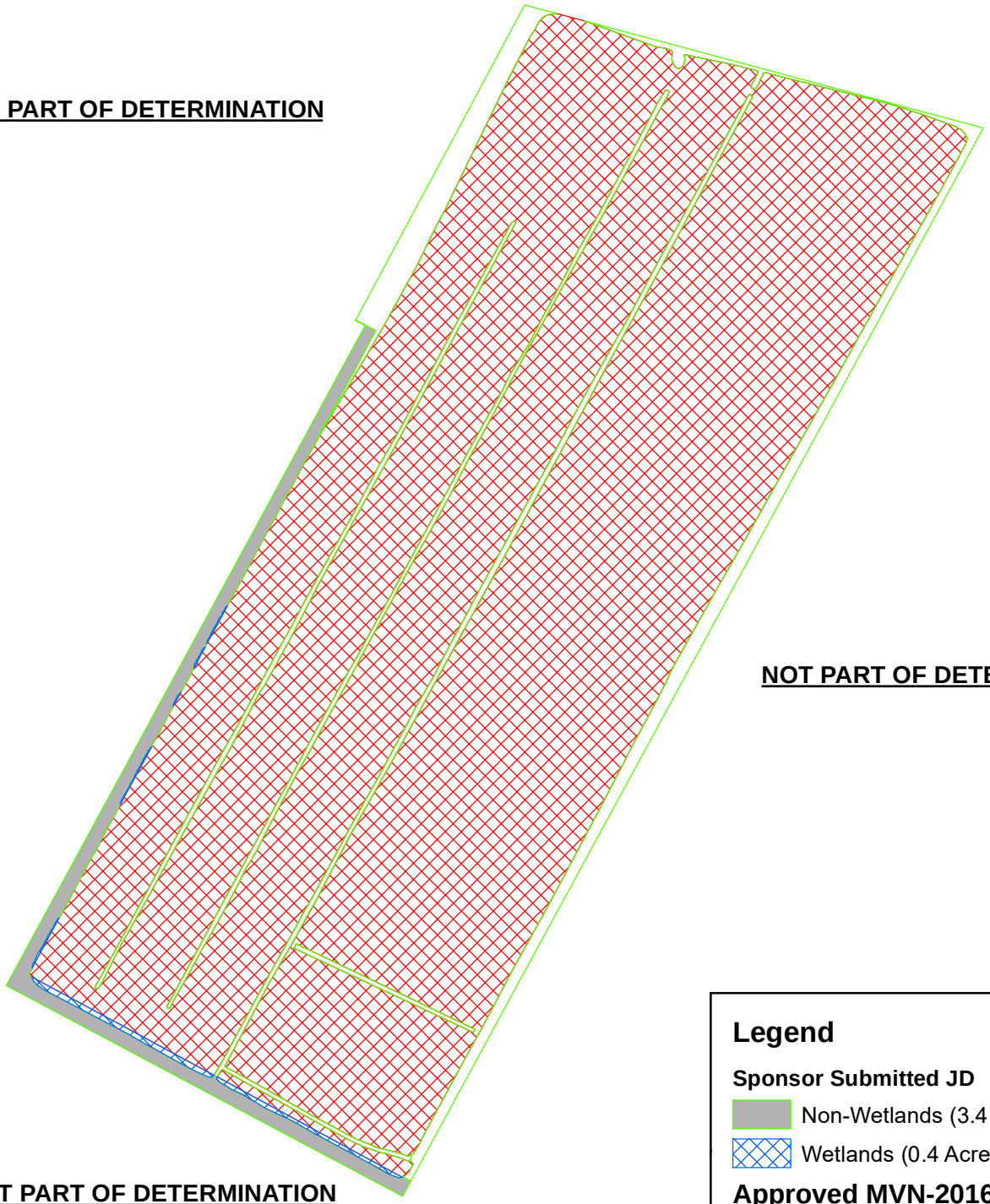
Vertical Datum: NAVD88 Feet **Author:** KCK

FIGURE 18

JMB

Document Path: N:\Mitigation Banks\Family Farms Mitigation Bank\Mapping\GIS Projects (.MXD)\Prospectus\1.0\Figure 18_jd_Exhibit_FFMB_11.05.2019.mxd

NOT PART OF DETERMINATION



NOT PART OF DETERMINATION

NOT PART OF DETERMINATION

Legend

Sponsor Submitted JD

- Non-Wetlands (3.4 Acres)
- Wetlands (0.4 Acres)

Approved MVN-2016-00228-SW

- Wetlands (102.6 Acres)
- Non-Wetlands (8.5 Acres)

0 300 600 900 1,200

Feet *1 in = 500 ft*

N

PROPOSED FAMILY FARMS MITIGATION BANK

Wetlands and Uplands Within Bank Boundary

LAFOURCHE PARISH,LA

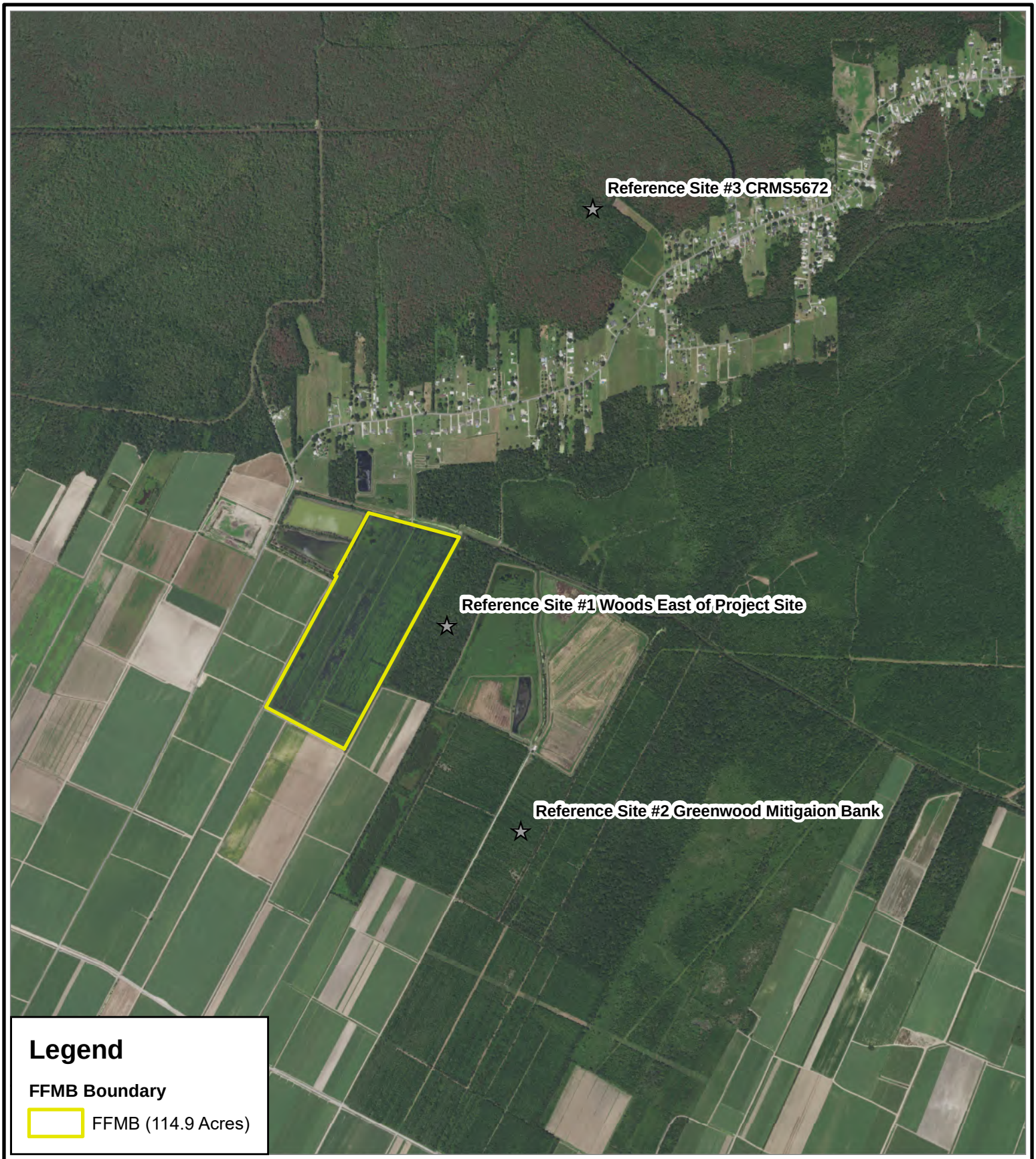
Coord Sys: NAD 1983 2011 StatePlane Louisiana South FIPS 1702 Ft US **Date:** 12/13/2019

Vertical Datum: NAVD88 Feet **Author:** CTG

FIGURE 19

JMB

Document Path: N:\Mitigation Banks\Family Farms Mitigation Bank\Mapping\GIS Projects (.MXD)\Prospectus\1.0\Figure 19_jd_BW_Exhibit_FFMB_11.05.2019.mxd



0 1,000 2,000 3,000 4,000
Feet
1 in = 2,000 ft

N

PROPOSED FAMILY FARMS MITIGATION BANK
REFERENCE SITE EXHIBIT
LAFOURCHE PARISH,LA

Coord Sys: NAD 1983 2011 StatePlane Louisiana South FIPS 1702 Ft US **Date:** 12/05/2019
Vertical Datum: NAVD88 Feet **Author:** KCK

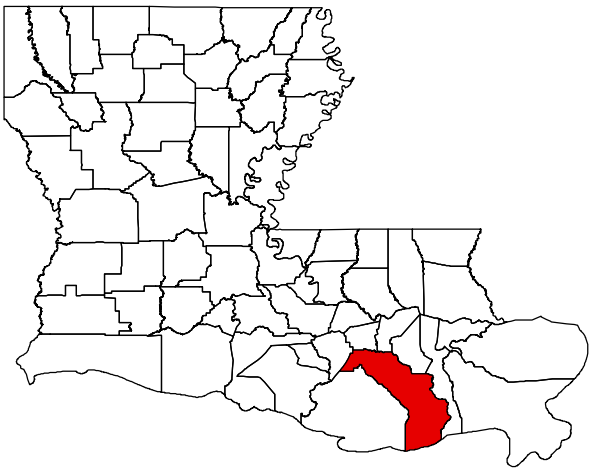
FIGURE 20

JMB

Document Path: N:\Mitigation Banks\Family Farms Mitigation Bank\Mapping\GIS Projects (.MXD)\Prospectus\1.0\Figure 20_Reference site_FFMB_11.13.2019.mxd

Attachment C:

Cross Sections



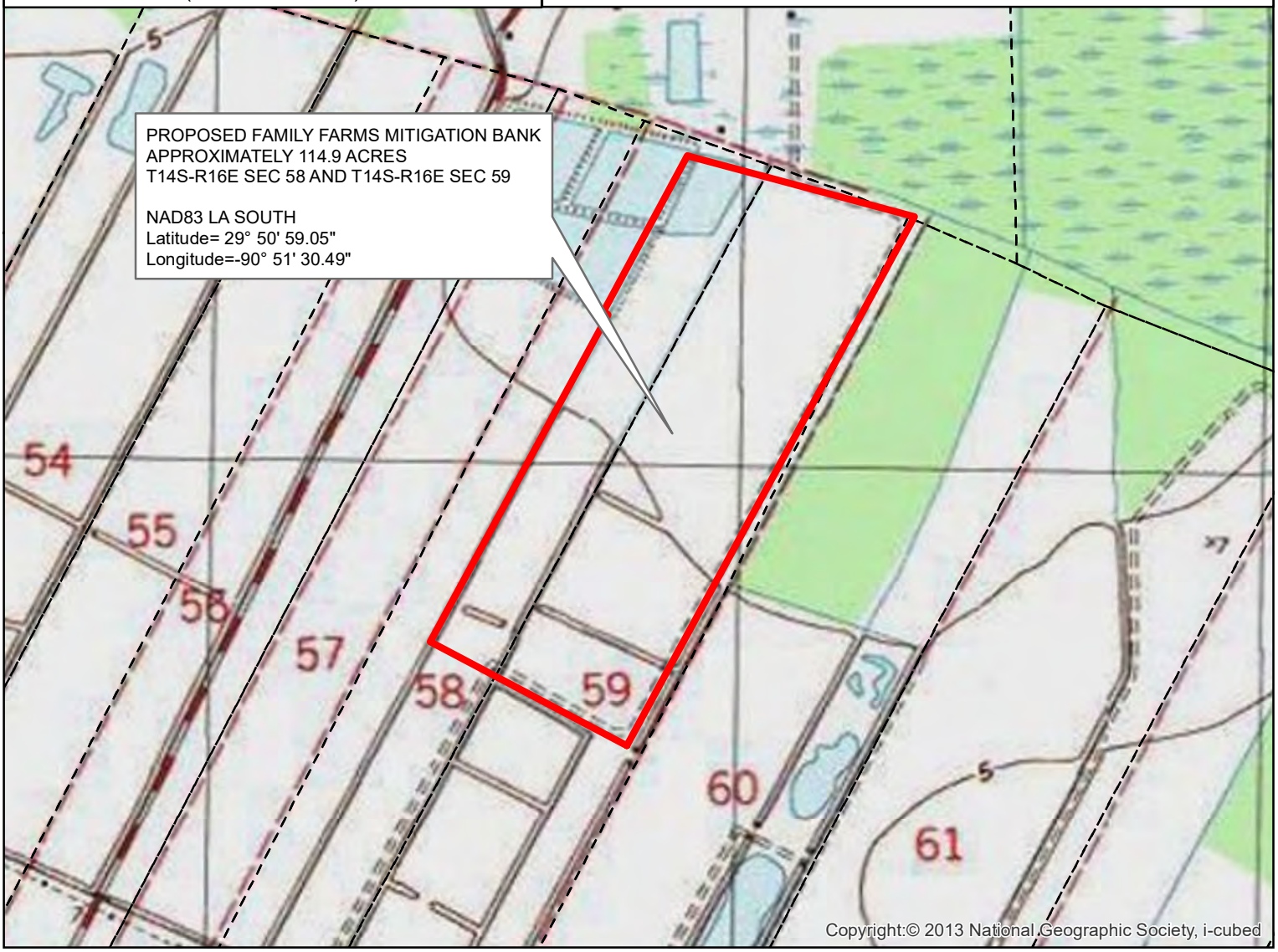
VICINITY MAP
(NOT TO SCALE)

1. All structures, facilities, well and pipelines/flowlines occuring in open water areas or in oilfield cannals or slopes shall be removed within 120 days of abandonment of the facilities for the herein permitted use unless prior written approval to leave such structures in place is received from the Office of Coastal Management. This condition does not preclude the necessity for revising the current permit or obtaining a separate Coastal Use Permit, should one be required.

2. As-Built drawings shall have date of completion of shown permitted activities and wubmitted within 30 days of said date to Louisiana Department of Natrual Resources, Office of Coastal Managment, P.O. Box 44487, Baton Rouge, LA 70804-4487.

3. Structures shall be marked/lighted in accrodance with U.S. Coast Guard regulations.

4. In order to ensure the safety of all parties, the permittee shall contact the Louisiana ONE CALL system (1-800-272-3020)(811) a minimum of 48 hours prior to the commencement of any excavation (Digging, Dredging, Jetting, etc.) or demolition activity.



THIS PLAT IS TO BE USED EXCLUSIVELY FOR THE ACQUSITION OF REGULATORY PERMITS

0 500 1,000 1,500 2,000
Feet 1 in = 1,000 ft

N

PROPOSED FAMILY FARMS MITIGATION BANK

USGS 7.5 MINUTE QUADRANGLE EXHIBIT

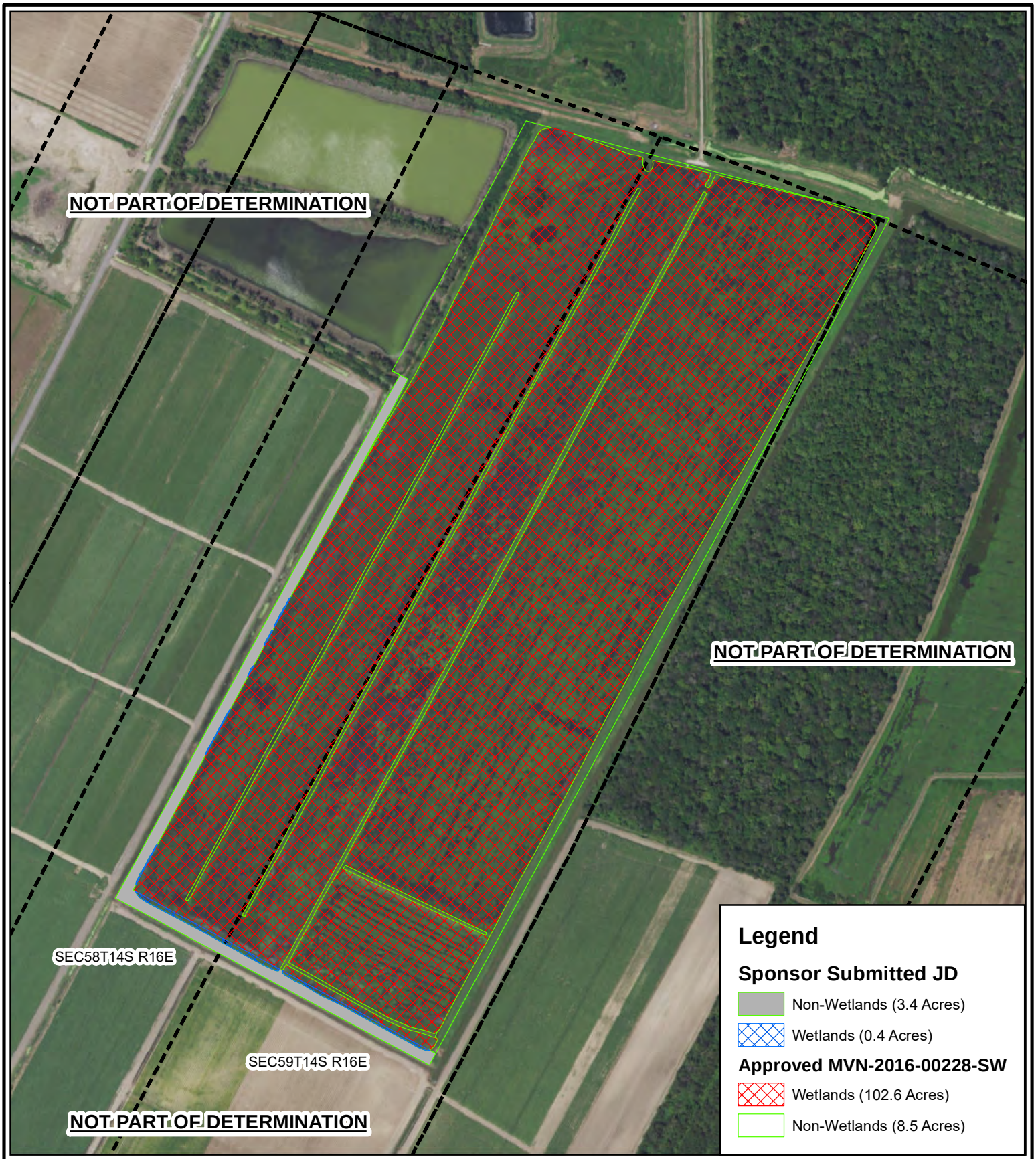
LAFOURCHE PARISH,LA

Coord Sys: NAD 1983 2011 StatePlane Louisiana South FIPS 1702 Ft US **Date:** 12/18/2019
Vertical Datum: NAVD88 Feet **Author:** CTG

FIGURE 01

JMB

Document Path: N:\Mitigation Banks\Family Farms Mitigation Bank\Mapping\GIS Projects (.MXD)\COE_Plans\Figure 01_Vicinity_and_Topo_FFMB_12.18.2019.mxd



THIS PLAT IS TO BE USED EXCLUSIVELY FOR THE ACQUSITION OF REGULATORY PERMITS

0 300 600 900 1,200

Feet *1 in = 500 ft*

PROPOSED FAMILY FARMS MITIGATION BANK

Wetlands and Uplands Within Bank Boundary

LAFOURCHE PARISH,LA

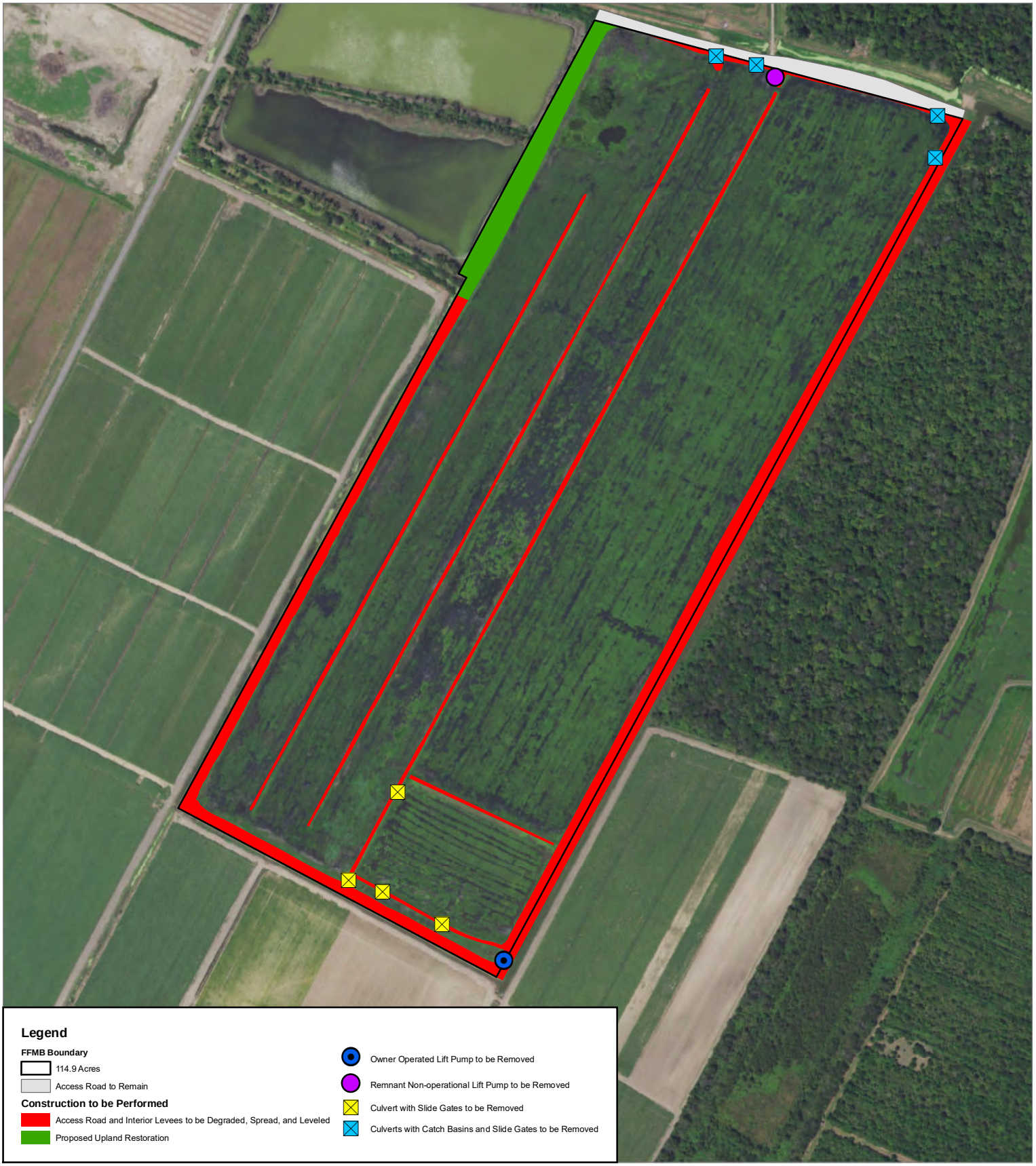
Coord Sys: NAD 1983 2011 StatePlane Louisiana South FIPS 1702 Ft US **Date:** 12/18/2019

Vertical Datum: NAVD88 Feet **Author:** CTG

FIGURE 02

JMB

Document Path: N:\Mitigation Banks\Family Farms Mitigation Bank\Mapping\GIS Projects (.MXD)\COE_Plans\Figure 02_jd_Exhibit_FFMB_12.18.2019.mxd



THIS PLAT IS TO BE USED EXCLUSIVELY FOR THE ACQUSITION OF REGULATORY PERMITS

0 250 500 750 1,000

Feet *1 in = 500 ft*

PROPOSED FAMILY FARMS MITIGATION BANK

PROPOSED CONSTRUCTION EXHIBIT

LAFOURCHE PARISH,LA

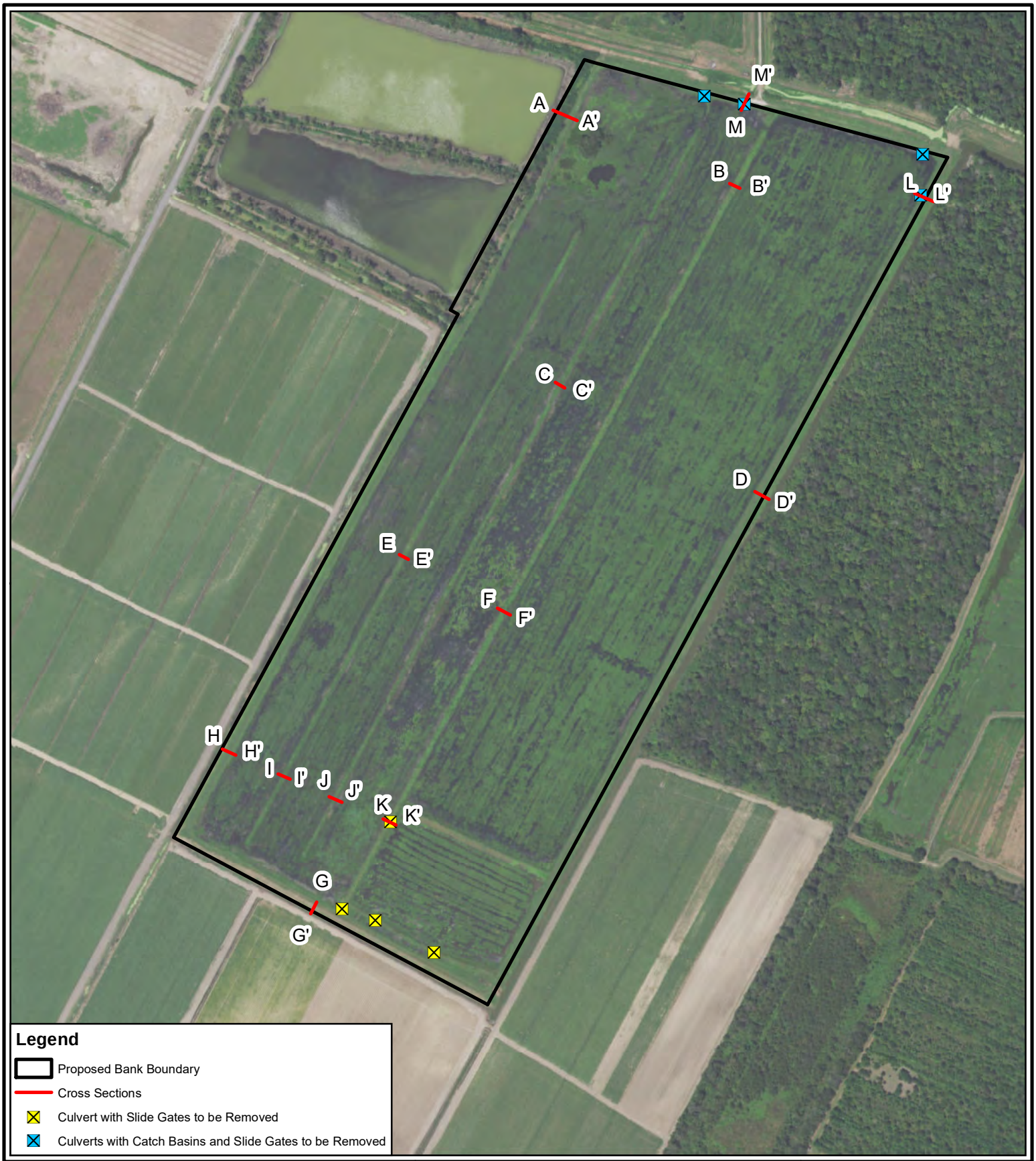
Coord Sys: NAD 1983 2011 StatePlane Louisiana South FIPS 1702 Ft US **Date:** 12/20/2019

Vertical Datum: NAVD88 Feet **Author:** CTG

FIGURE 03

JMB

Document Path: N:\Mitigation Banks\Family Farms Mitigation Bank\Mapping\GIS Projects (.MXD)\COE_Plans\Figure 03_Proposed Construction_Exhibit_FFMB_12.18.2019.mxd



THIS PLAT IS TO BE USED EXCLUSIVELY FOR THE ACQUSITION OF REGULATORY PERMITS

0 250 500 750 1,000
Feet
1 in = 500 ft

PROPOSED FAMILY FARMS MITIGATION BANK

CROSS SECTION OVERVIEW EXHIBIT

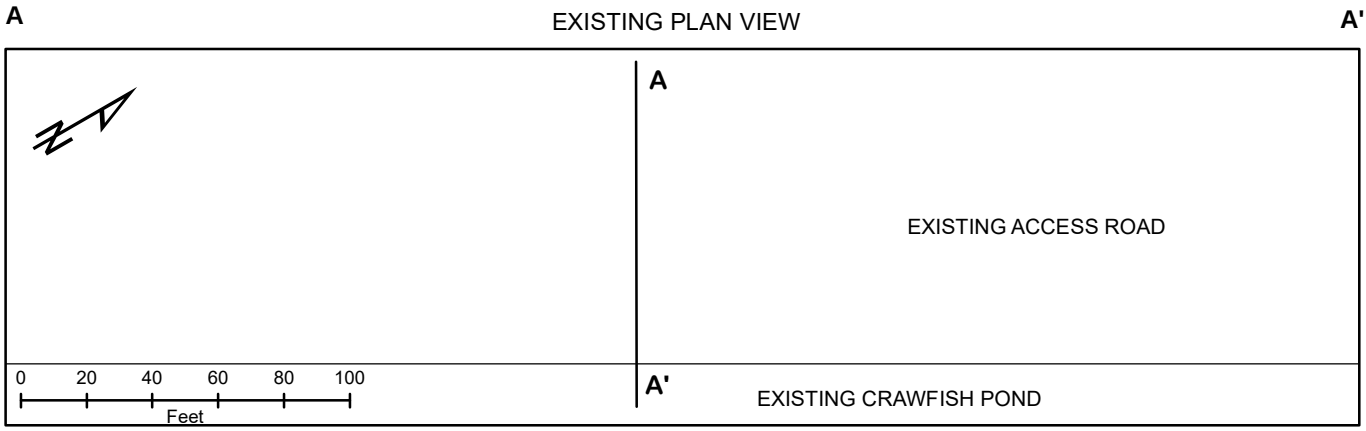
LAFOURCHE PARISH, LA

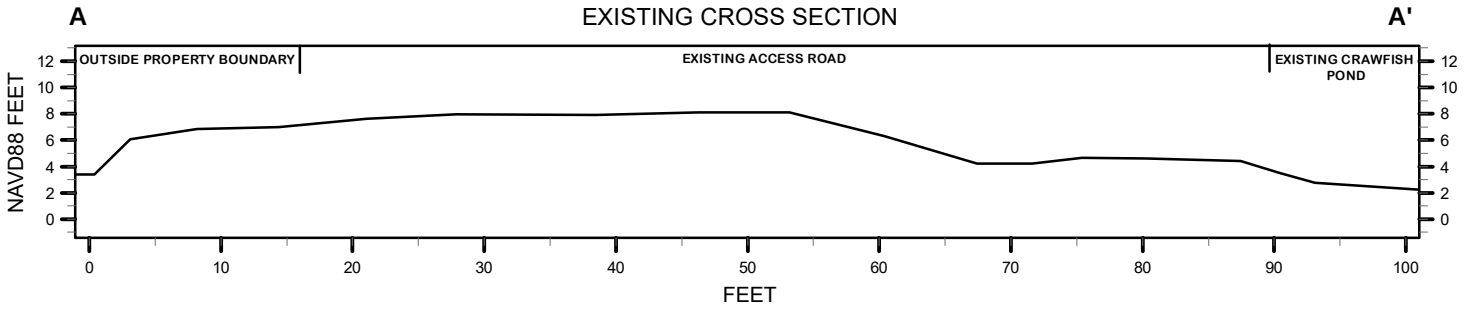
Coord Sys: NAD83 2011 Louisiana South ftUS	**Date:** 12/23/2019
Vertical Datum: NAVD88 Feet	**Author:** CTG

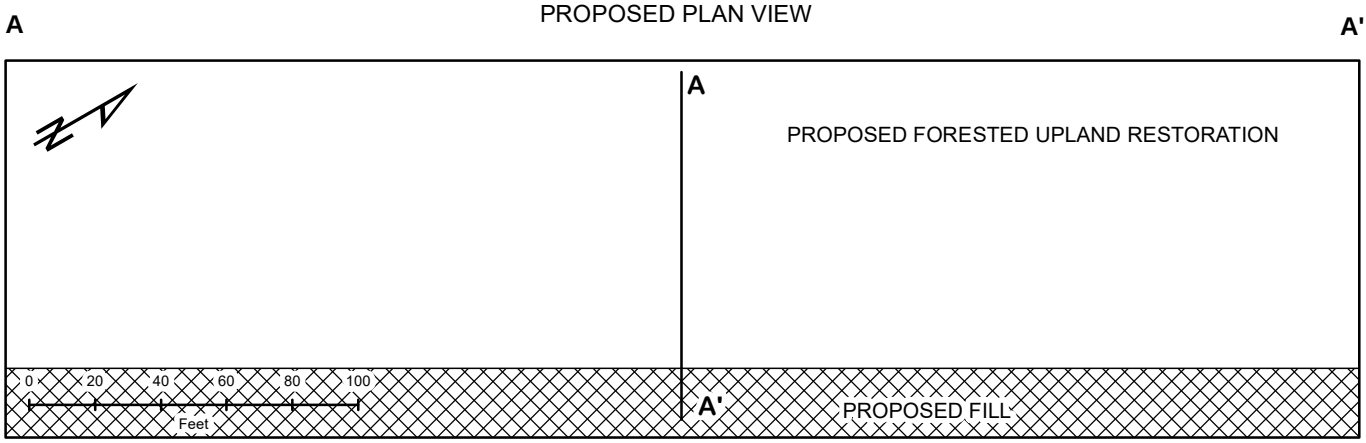
FIGURE 04

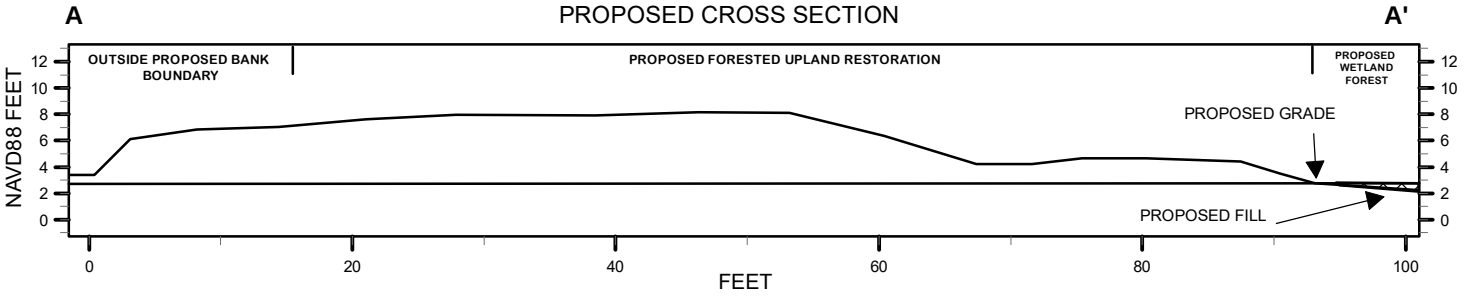
JMB

Document Path: N:\Mitigation Banks\Family Farms Mitigation Bank\Mapping\GIS Projects (.MXD)\COE_Plans\Figure 04 FFMB_Cross_Section_Exhibit_12.18.2019.mxd









PROPOSED FAMILY FARMS MITIGATION BANK

CROSS SECTION A EXHIBIT
LAFOURCHE PARISH, LA

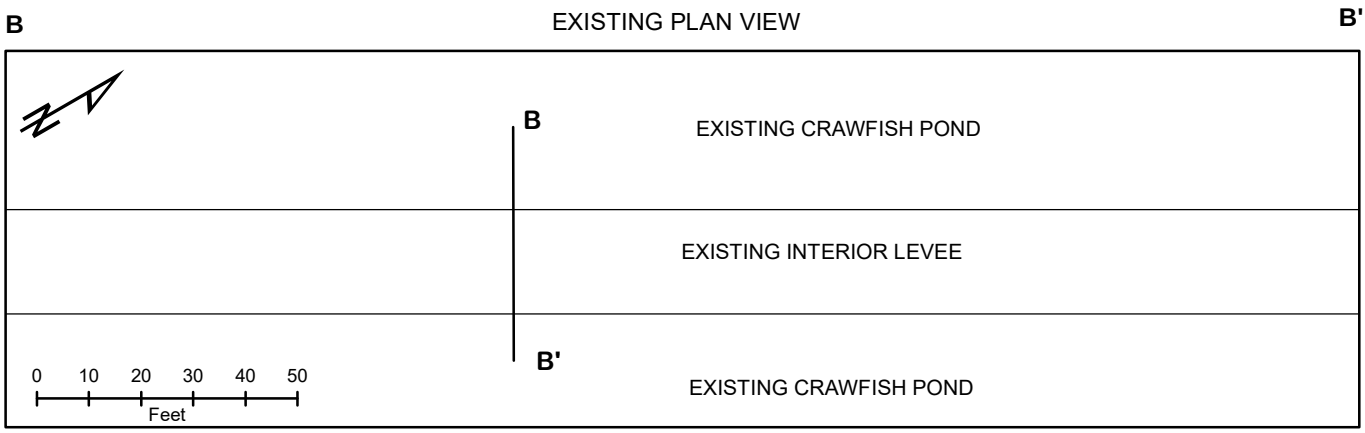
Drawing No.:

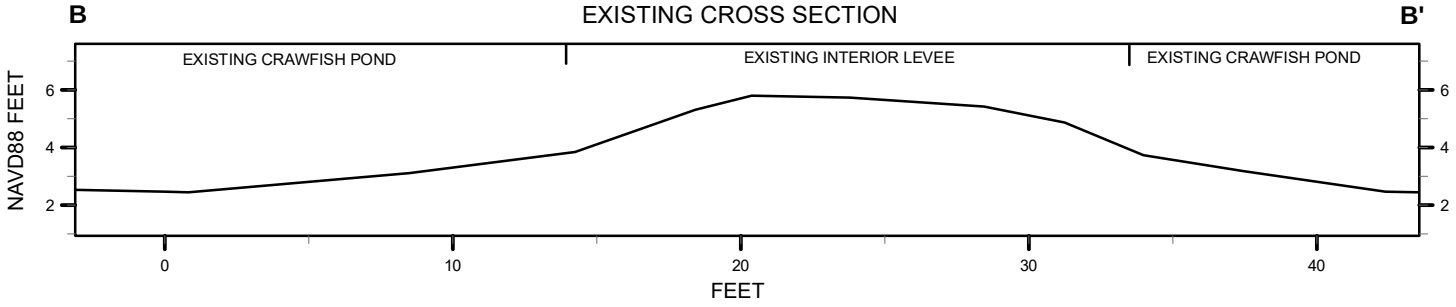
Date: 12/20/2019 Author: CTG

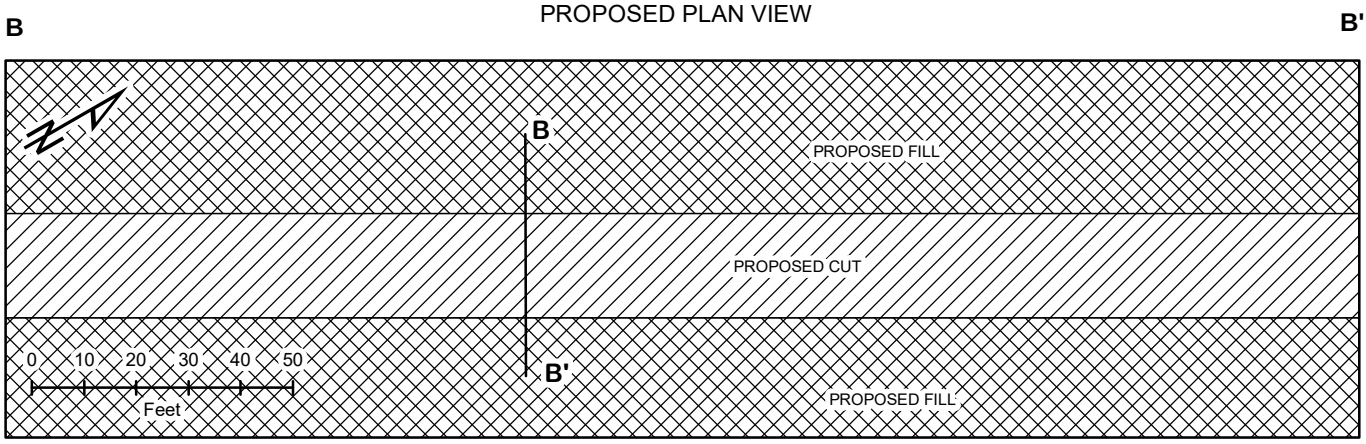
FIGURE 05

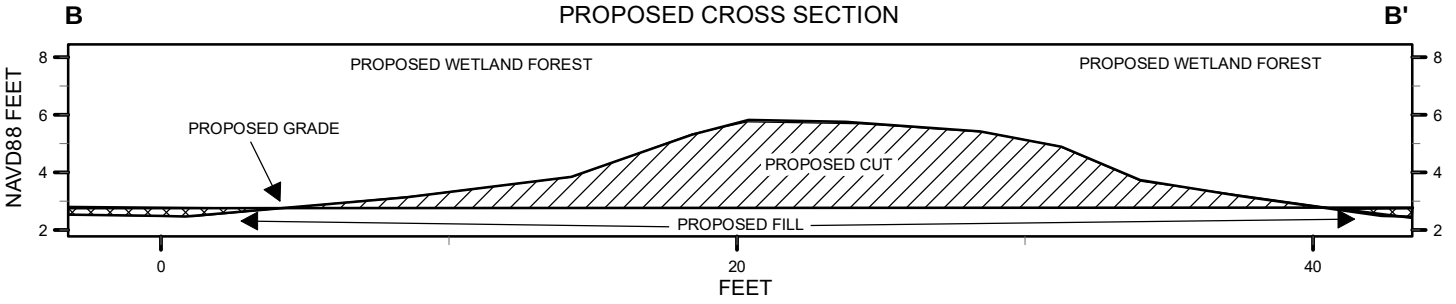
JMB

Document Path: N:\Mitigation Banks\Family Farms Mitigation Bank\Mapping\GIS Projects (.MXD)\COE_Plans\Figure 05 XSections_A.mxd









ELEVATION = NATURAL GRADE

FILL TO BE SPREAD EVENLY THROUGHOUT PROJECT AREA

PROPOSED FAMILY FARMS MITIGATION BANK

CROSS SECTION B EXHIBIT
LAFOURCHE PARISH, LA

Drawing No.:

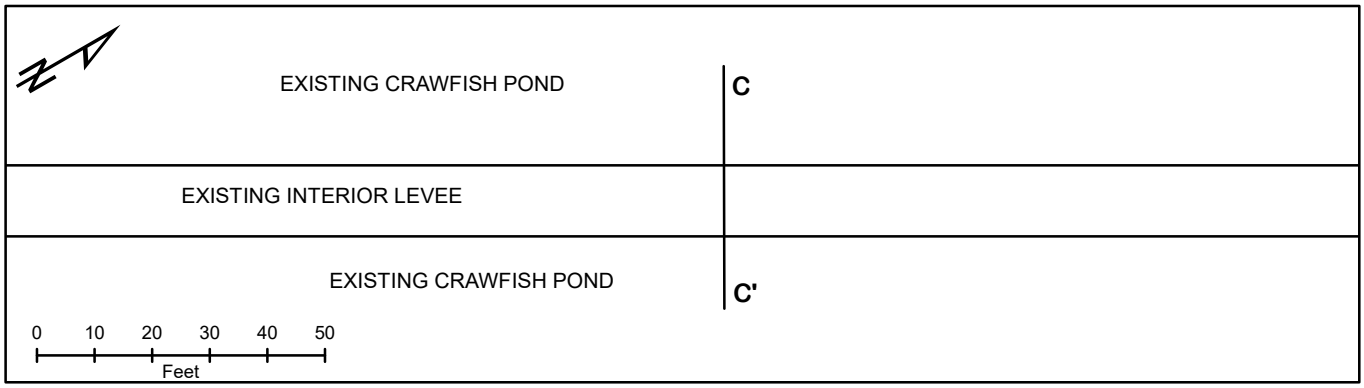
Date: 12/23/2019 Author: CTG

FIGURE 06

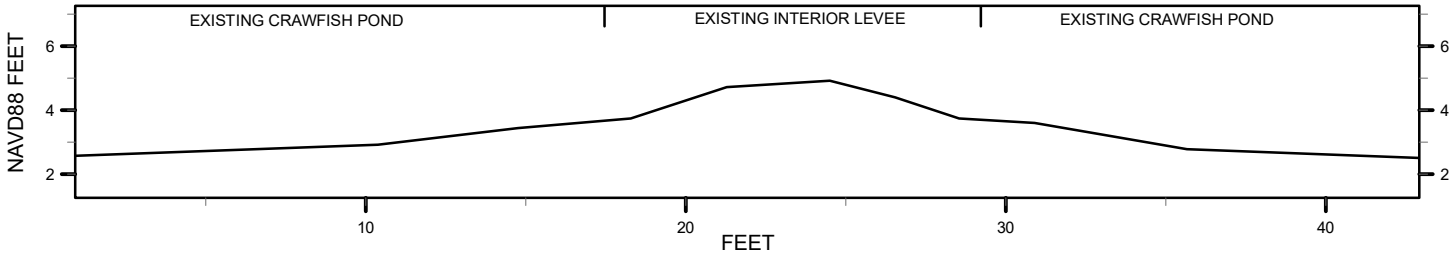
JMB

Document Path: N:\Mitigation Banks\Family Farms Mitigation Bank\Mapping\GIS Projects (.MXD)\COE_Plans\Figure 06 XSections_B.mxd

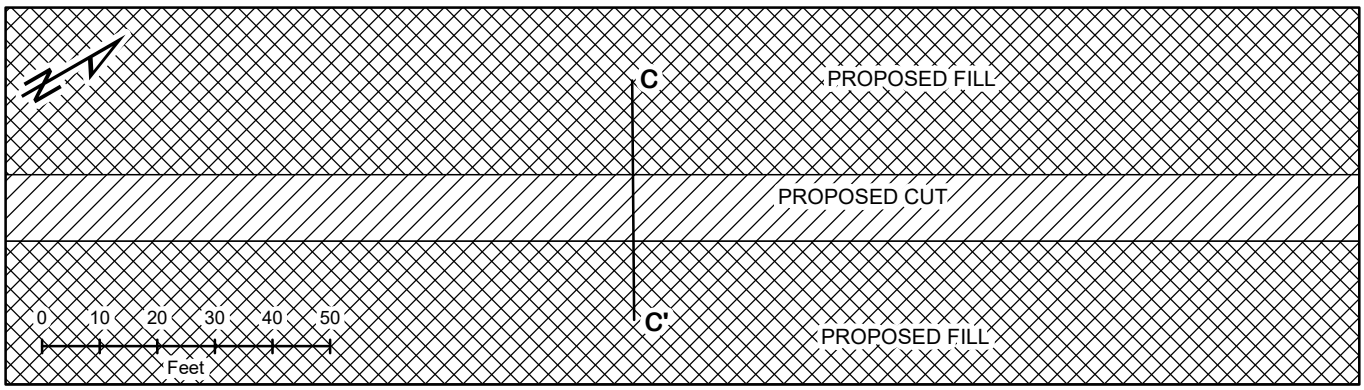
EXISTING PLAN VIEW



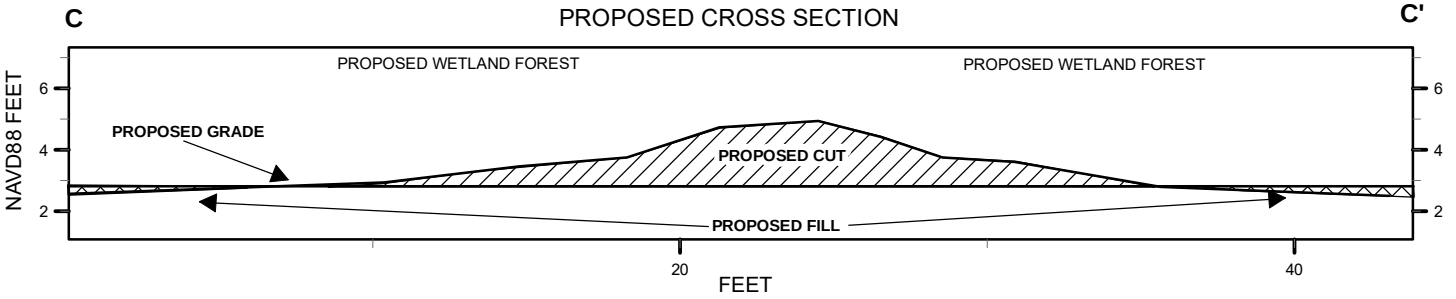
EXISTING CROSS SECTION



PROPOSED PLAN VIEW



PROPOSED CROSS SECTION



ELEVATION = NATURAL GRADE

FILL TO BE SPREAD EVENLY THROUGHOUT PROJECT AREA

PROPOSED FAMILY FARMS MITIGATION BANK

CROSS SECTION C EXHIBIT
LAFOURCHE PARISH, LA

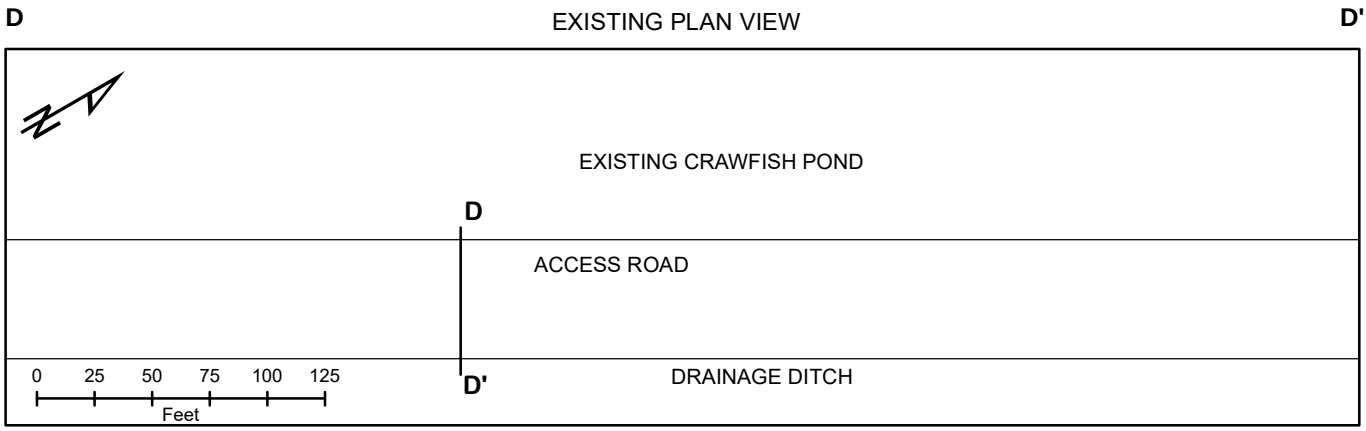
Drawing No.:

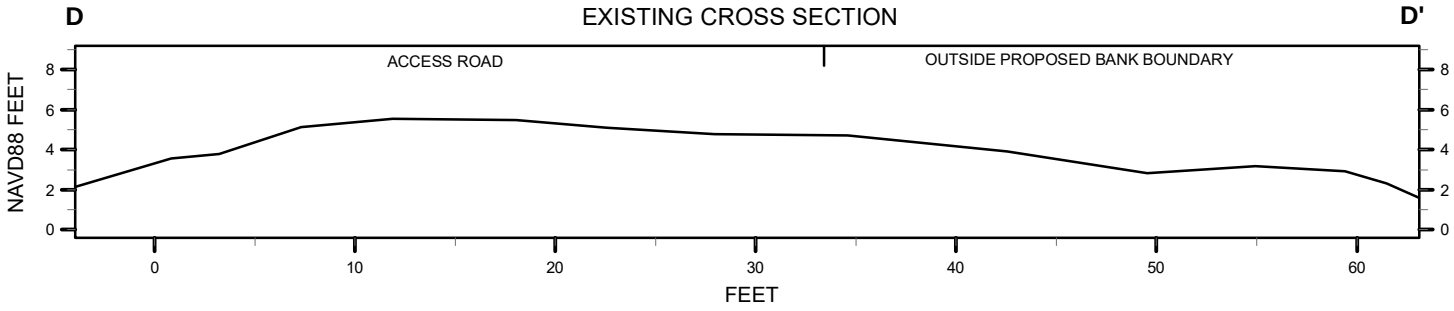
Date: 12/23/2019 Author: CTG

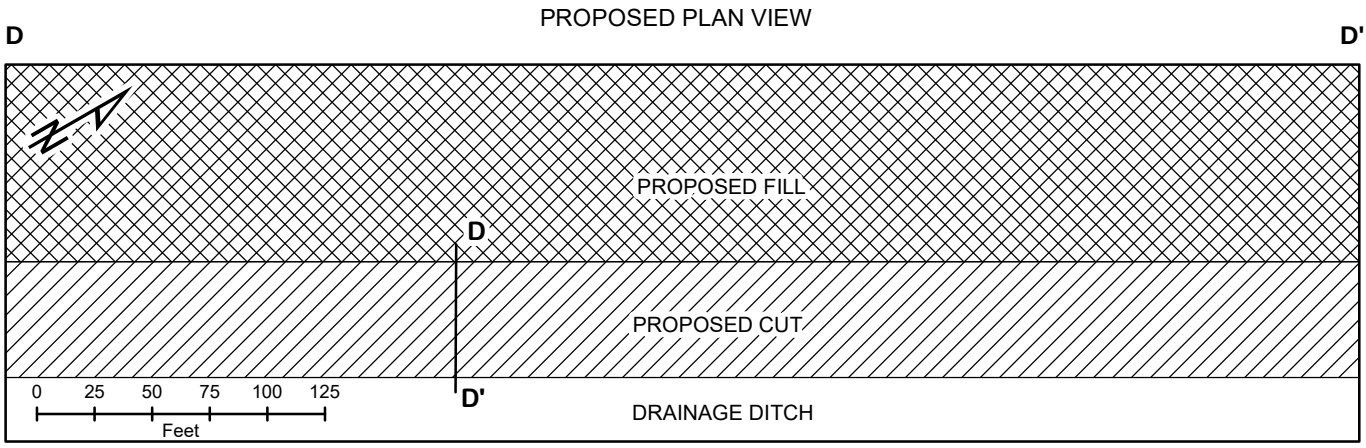
FIGURE 07

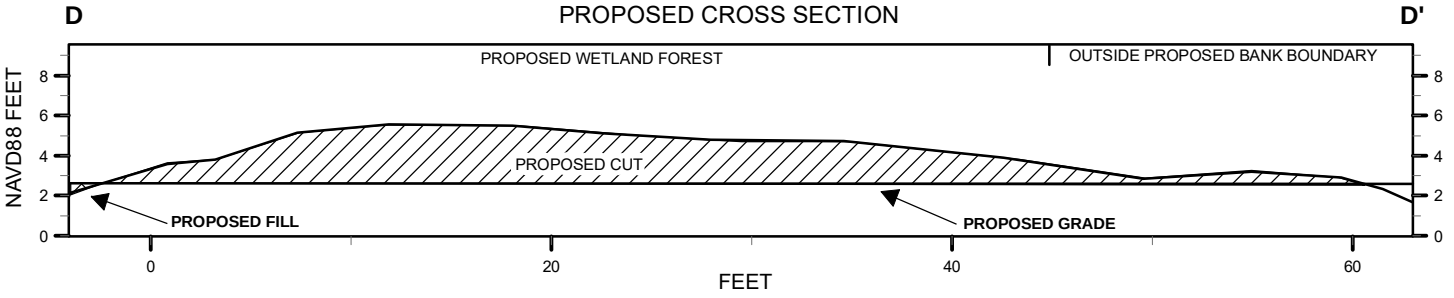
JMB

Document Path: N:\Mitigation Banks\Family Farms Mitigation Bank\Mapping\GIS Projects (.MXD)\COE_Plans\Figure 07 XSections_C.mxd









ELEVATION = NATURAL GRADE

FILL TO BE SPREAD EVENLY THROUGHOUT PROJECT AREA

PROPOSED FAMILY FARMS MITIGATION BANK

CROSS SECTION D EXHIBIT
LAFOURCHE PARISH, LA

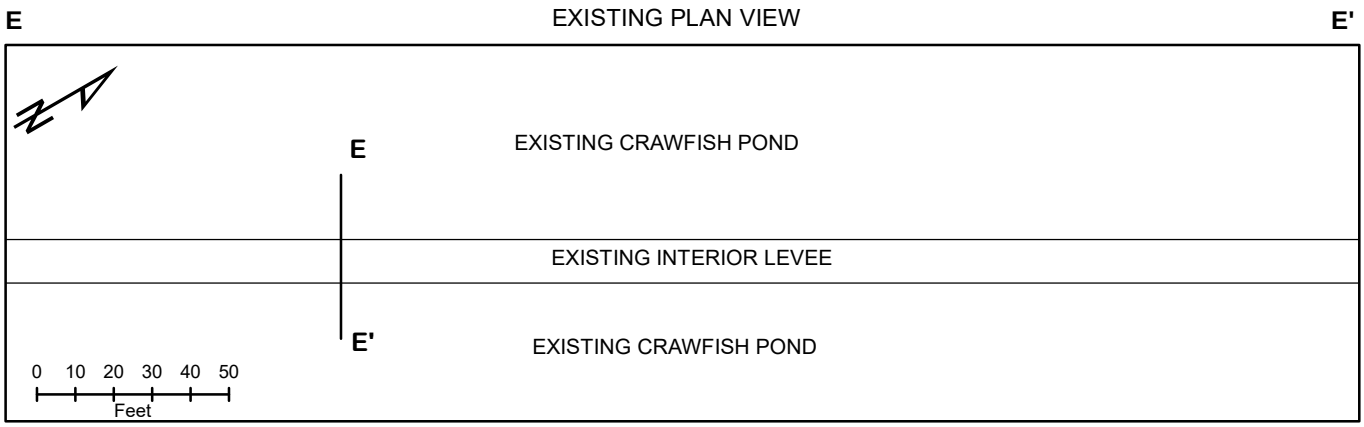
Drawing No.:

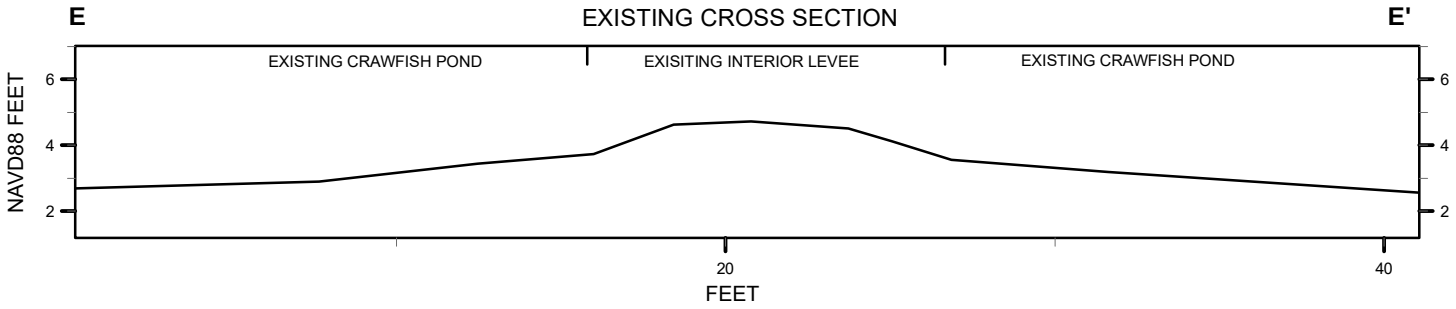
Date: 12/23/2019 Author: CTG

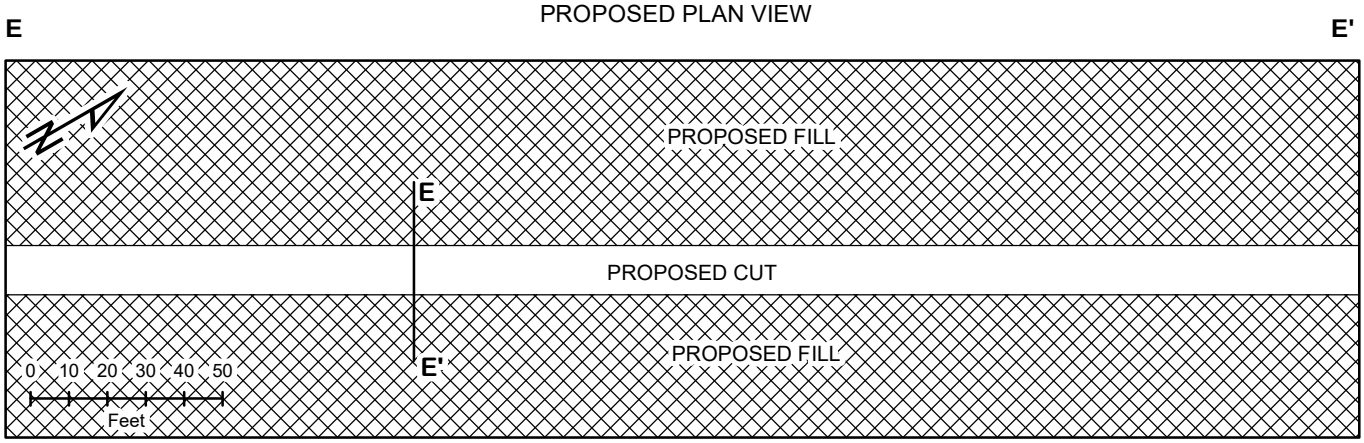
FIGURE 08

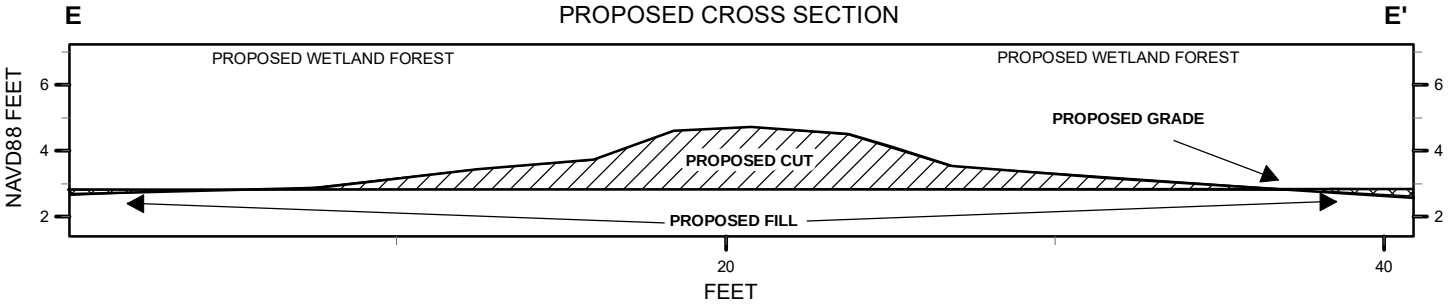
JMB

Document Path: N:\Mitigation Banks\Family Farms Mitigation Bank\Mapping\GIS Projects (.MXD)\COE_Plans\Figure 08 XSections_D.mxd









ELEVATION = NATURAL GRADE

FILL TO BE SPREAD EVENLY THROUGHOUT PROJECT AREA

PROPOSED FAMILY FARMS MITIGATION BANK

CROSS SECTION E EXHIBIT
LAFOURCHE PARISH, LA

Drawing No.:

Date: 12/23/2019 Author: CTG

FIGURE 09

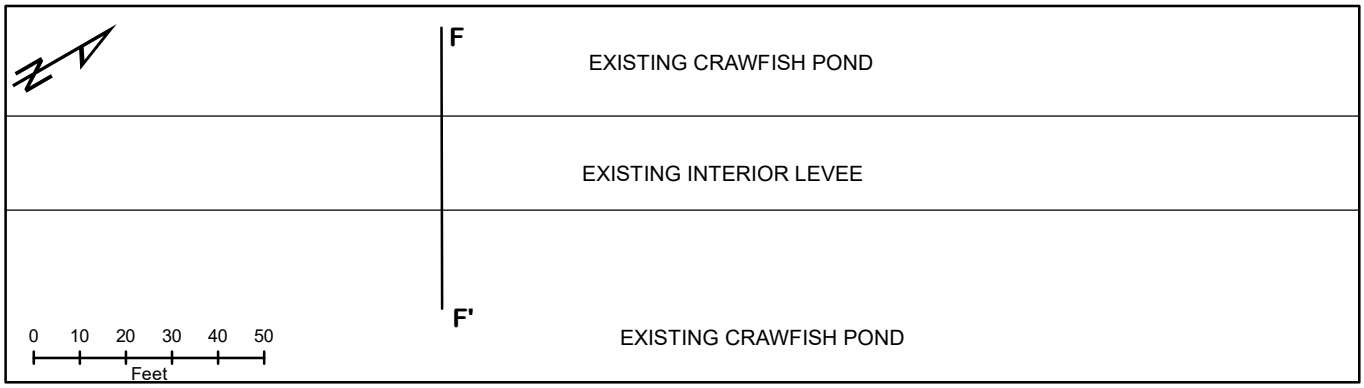
JMB

Document Path: N:\Mitigation Banks\Family Farms Mitigation Bank\Mapping\GIS Projects (.MXD)\COE_Plans\Figure 09 XSections_E.mxd

F

EXISTING PLAN VIEW

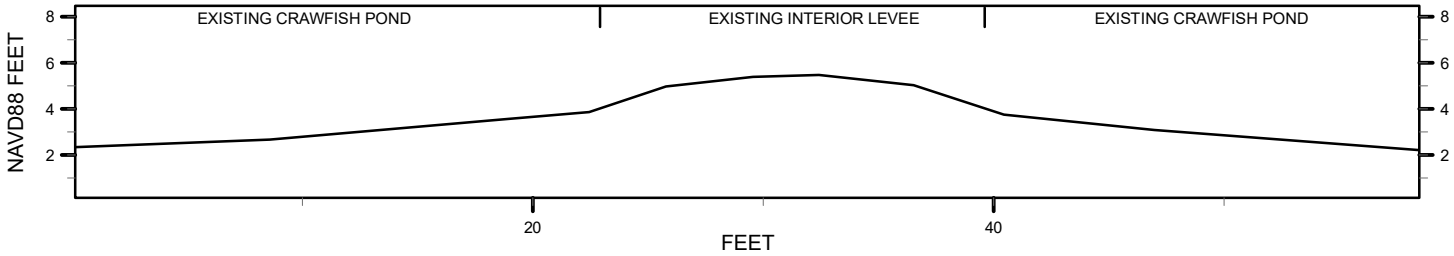
F'



F

EXISTING CROSS SECTION

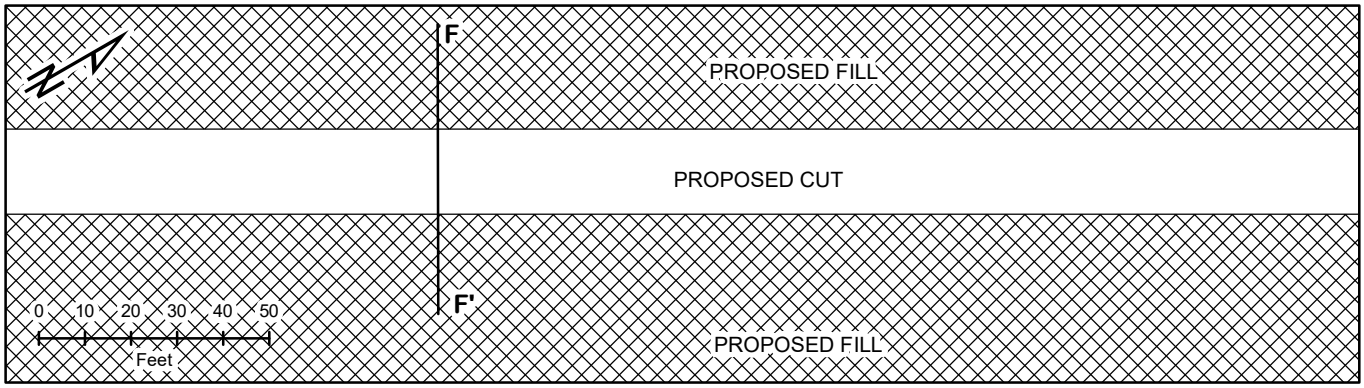
F'



F

PROPOSED PLAN VIEW

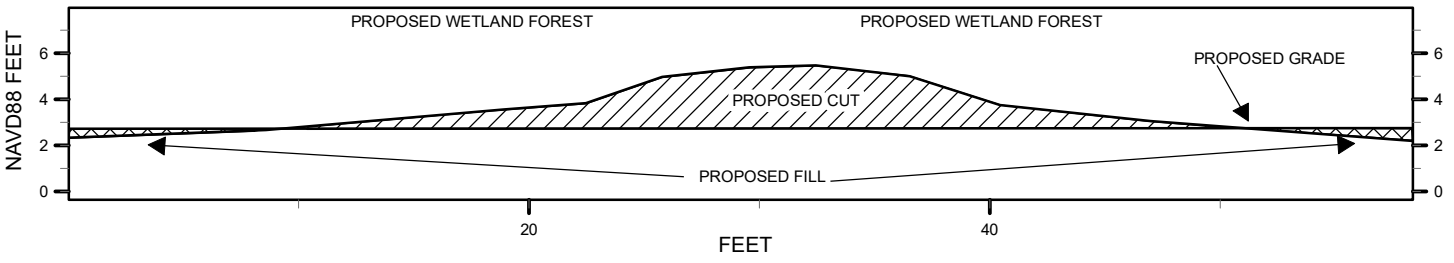
F'



F

PROPOSED CROSS SECTION

F'



ELEVATION = NATURAL GRADE

FILL TO BE SPREAD EVENLY THROUGHOUT PROJECT AREA

PROPOSED FAMILY FARMS MITIGATION BANK

CROSS SECTION F EXHIBIT
LAFOURCHE PARISH, LA

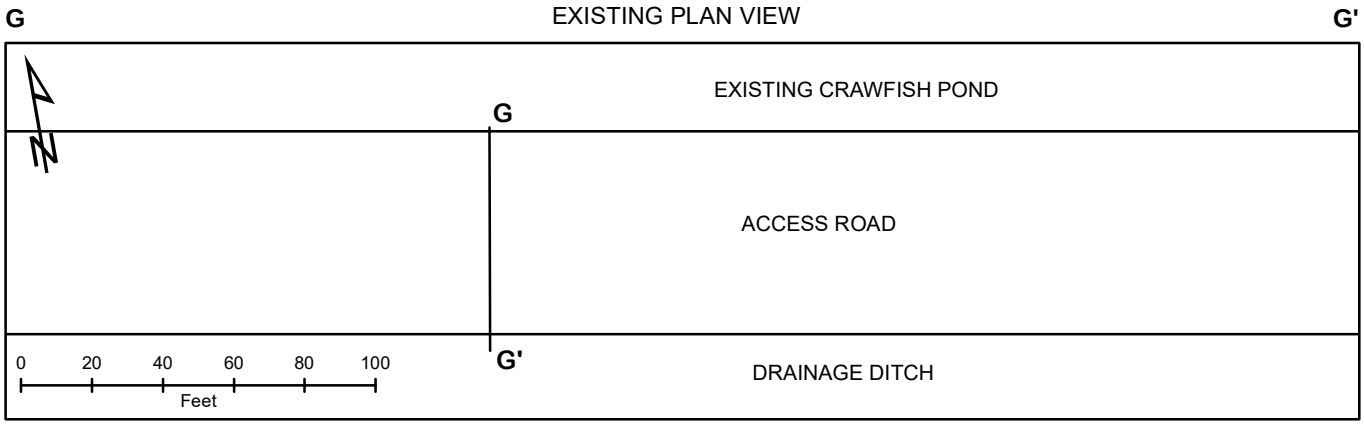
Drawing No.:

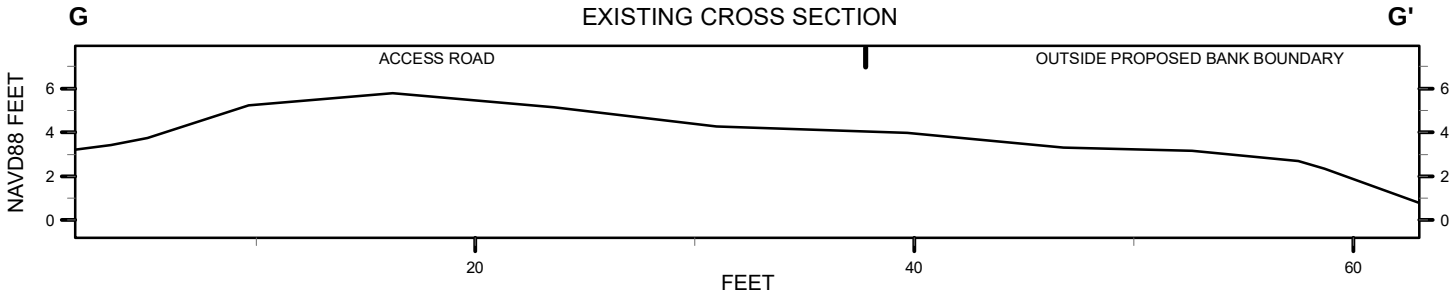
Date: 12/23/2019 Author: CTG

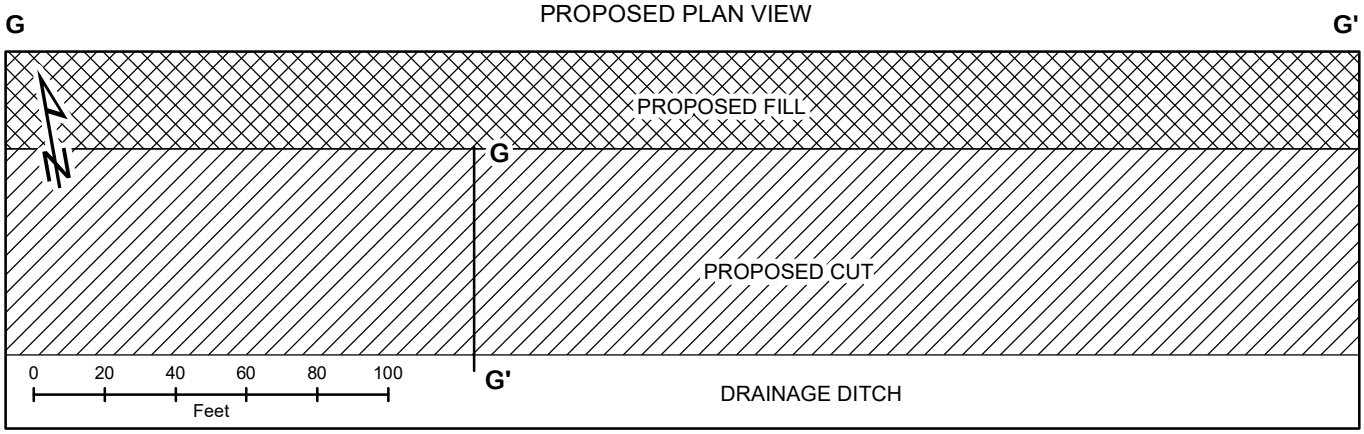
FIGURE 10

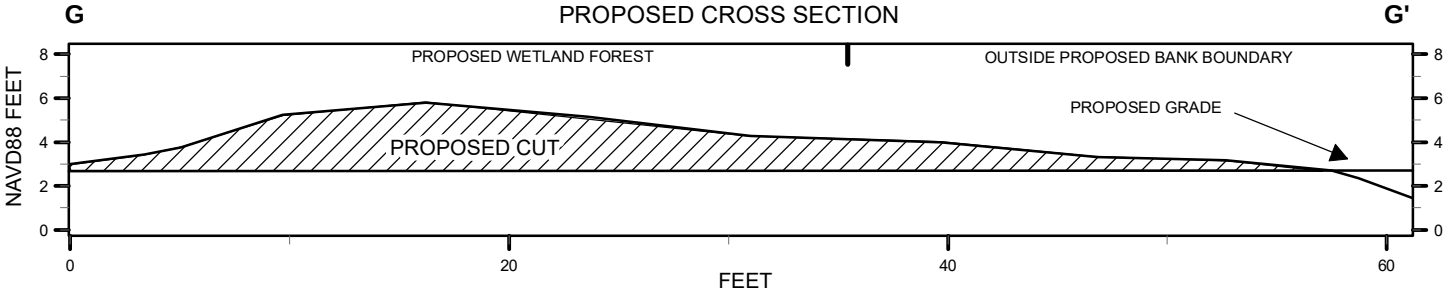
JMB

Document Path: N:\Mitigation Banks\Family Farms Mitigation Bank\Mapping\GIS Projects (.MXD)\COE_Plans\Figure 10 XSections_F.mxd









ELEVATION = NATURAL GRADE

FILL TO BE SPREAD EVENLY THROUGHOUT PROJECT AREA

PROPOSED FAMILY FARMS MITIGATION BANK

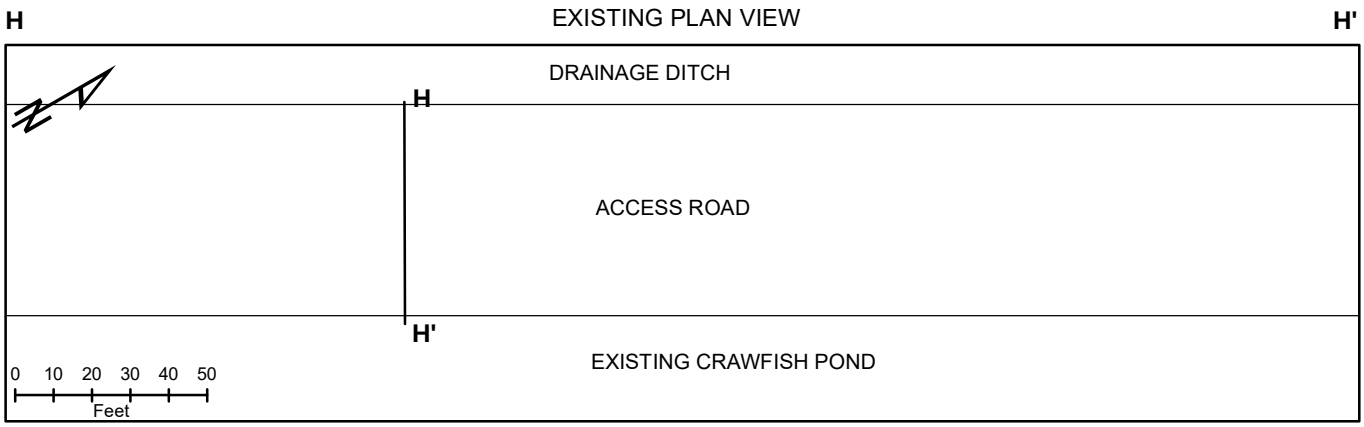
CROSS SECTION G EXHIBIT
LAFOURCHE PARISH, LA

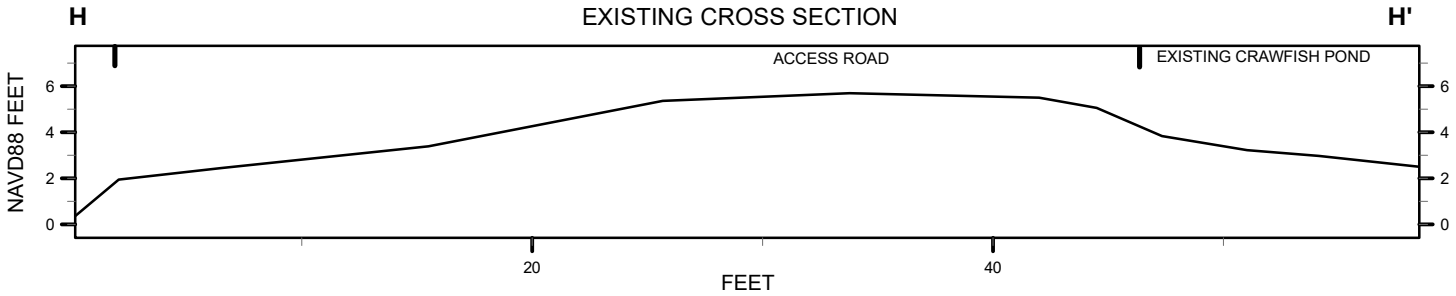
Drawing No.:

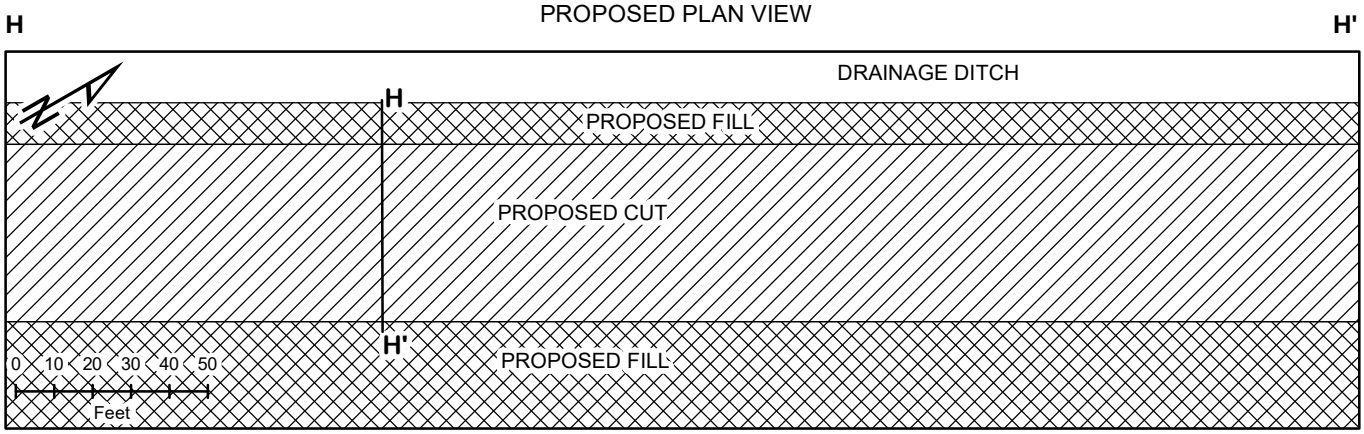
Date: 12/23/2019 Author: CTG

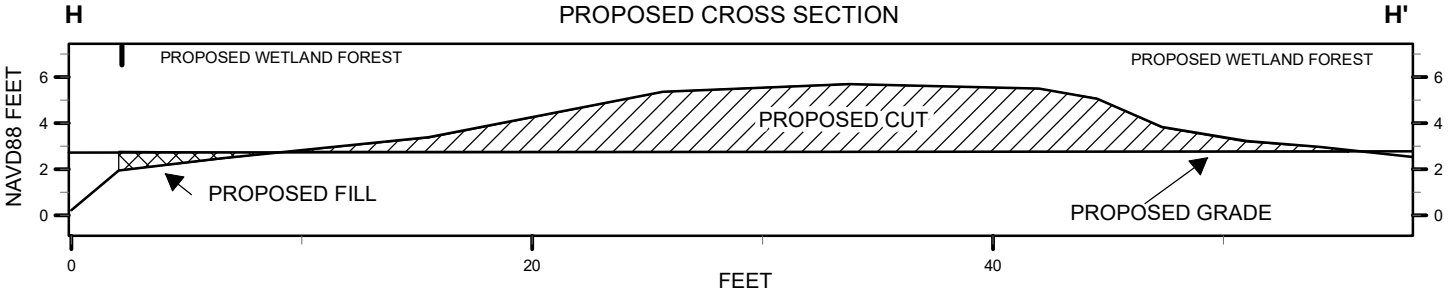
FIGURE 11

Document Path: N:\Mitigation Banks\Family Farms Mitigation Bank\Mapping\GIS Projects (.MXD)\COE_Plans\Figure 11 XSections_G.mxd









ELEVATION = NATURAL GRADE

FILL TO BE SPREAD EVENLY THROUGHOUT PROJECT AREA

PROPOSED FAMILY FARMS MITIGATION BANK

CROSS SECTION H EXHIBIT
LAFOURCHE PARISH, LA

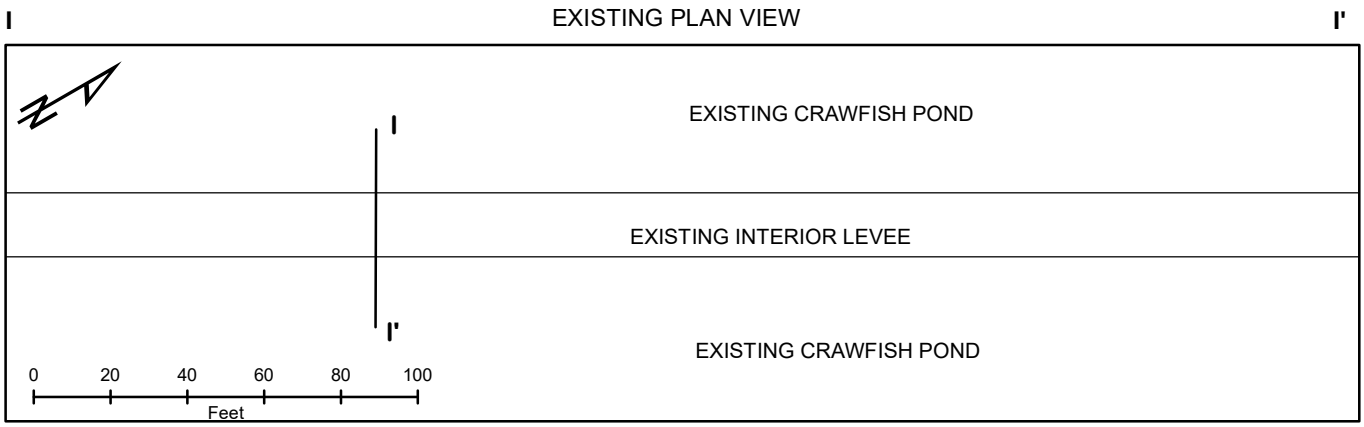
Drawing No.:

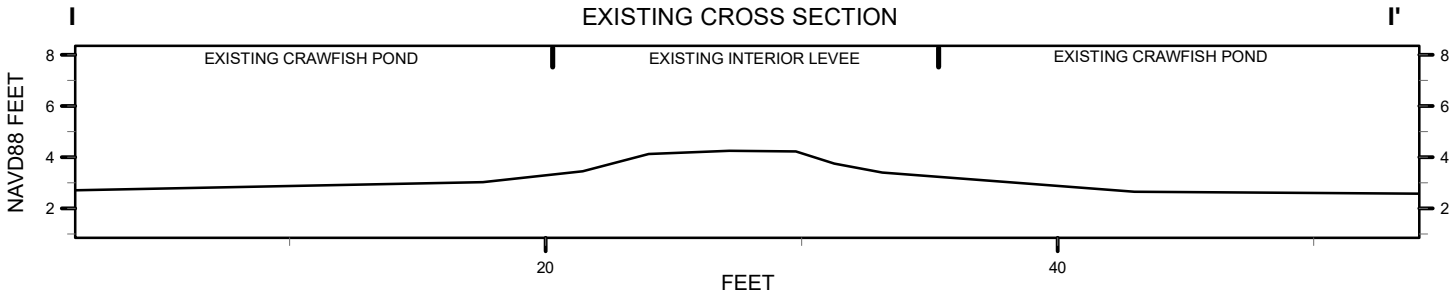
Date: 12/23/2019 Author: CTG

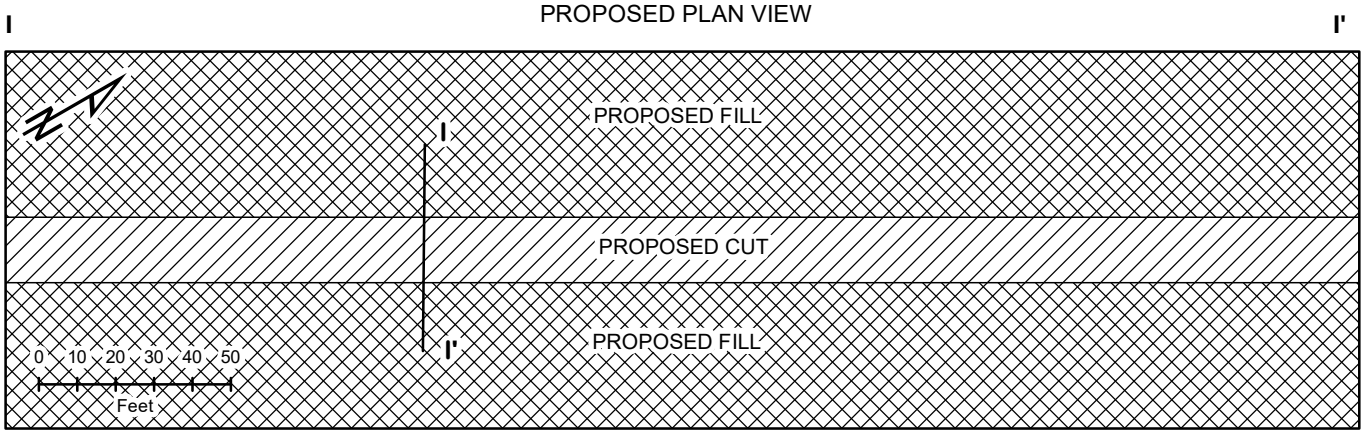
FIGURE 12

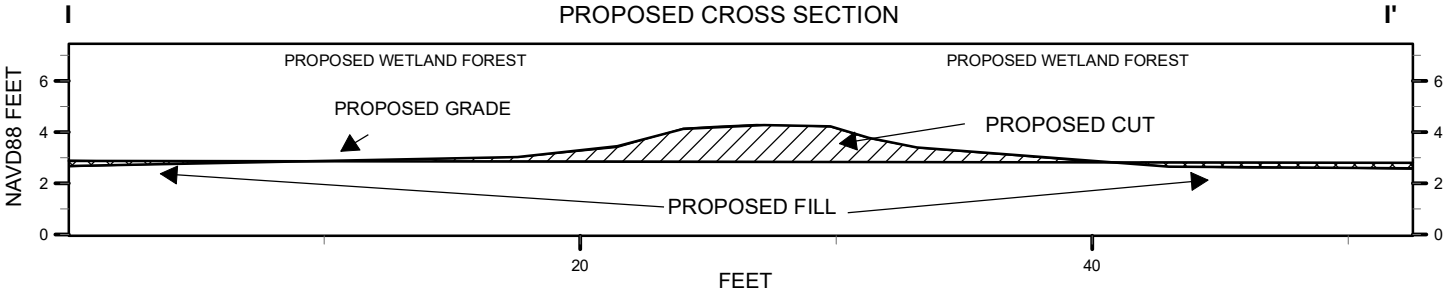
JMB

Document Path: N:\Mitigation Banks\Family Farms Mitigation Bank\Mapping\GIS Projects (.MXD)\COE_Plans\Figure 12 XSections_H.mxd









ELEVATION = NATURAL GRADE

FILL TO BE SPREAD EVENLY THROUGHOUT PROJECT AREA

PROPOSED FAMILY FARMS MITIGATION BANK

CROSS SECTION I EXHIBIT
LAFOURCHE PARISH, LA

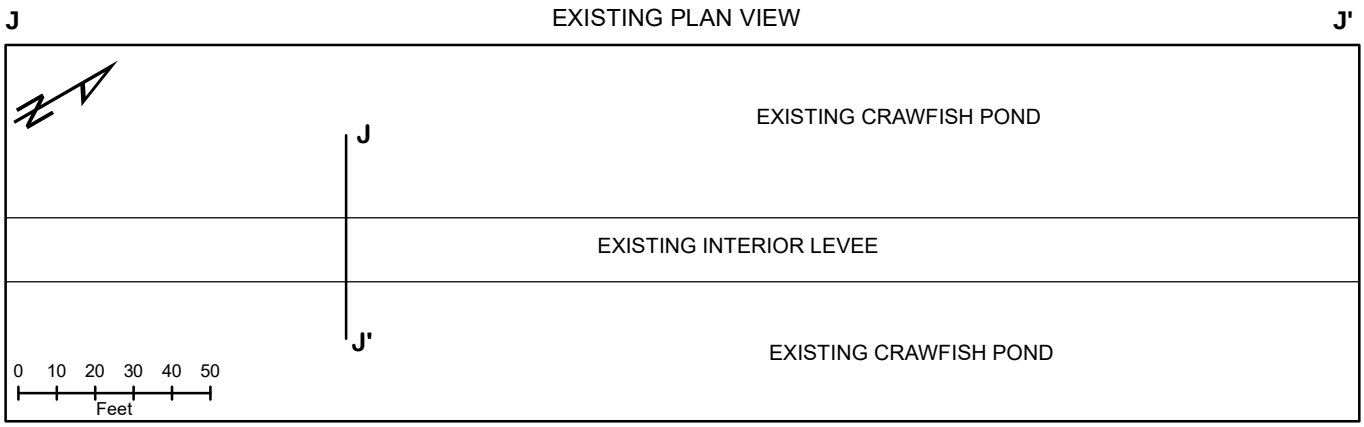
Drawing No.:

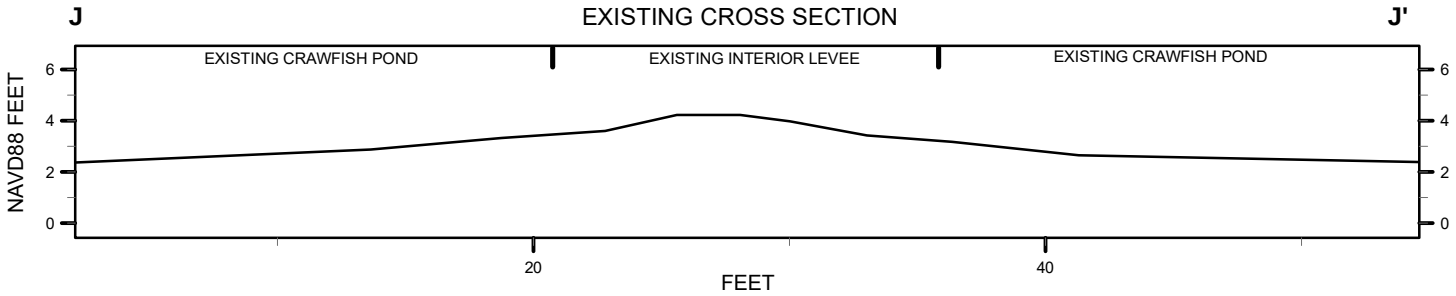
Date: 12/23/2019 Author: CTG

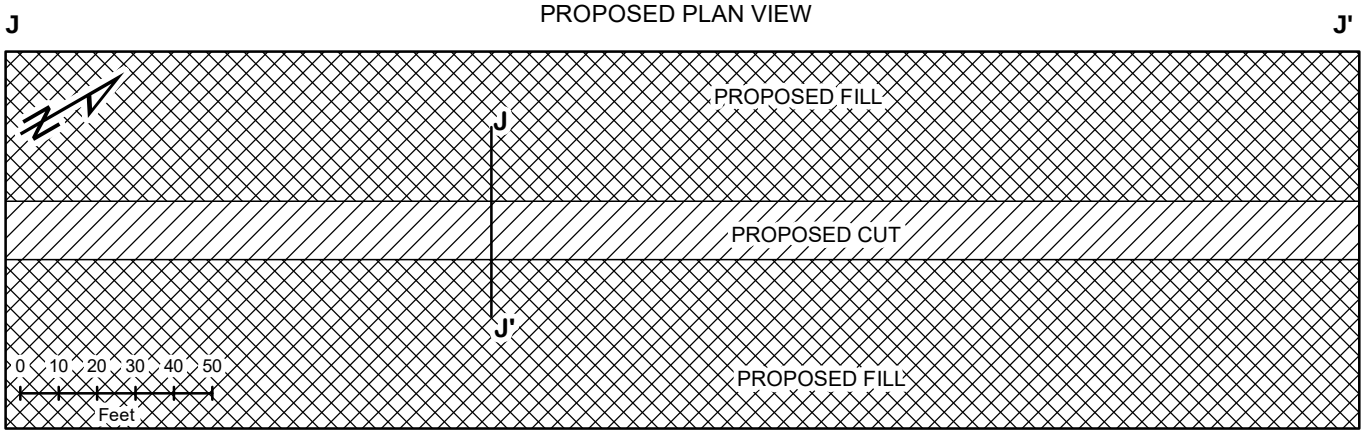
FIGURE 13

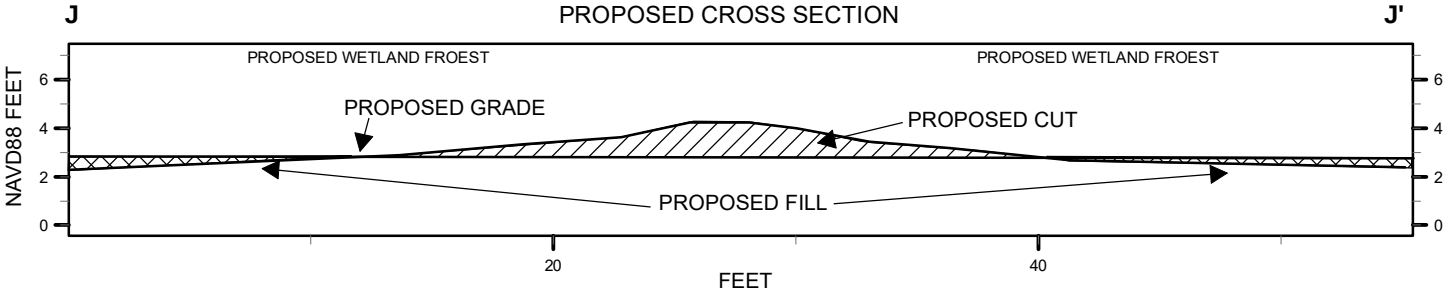
JMB

Document Path: N:\Mitigation Banks\Family Farms Mitigation Bank\Mapping\GIS Projects (.MXD)\COE_Plans\Figure 13 XSections_I.mxd









ELEVATION = NATURAL GRADE

FILL TO BE SPREAD EVENLY THROUGHOUT PROJECT AREA

PROPOSED FAMILY FARMS MITIGATION BANK

CROSS SECTION J EXHIBIT
LAFOURCHE PARISH, LA

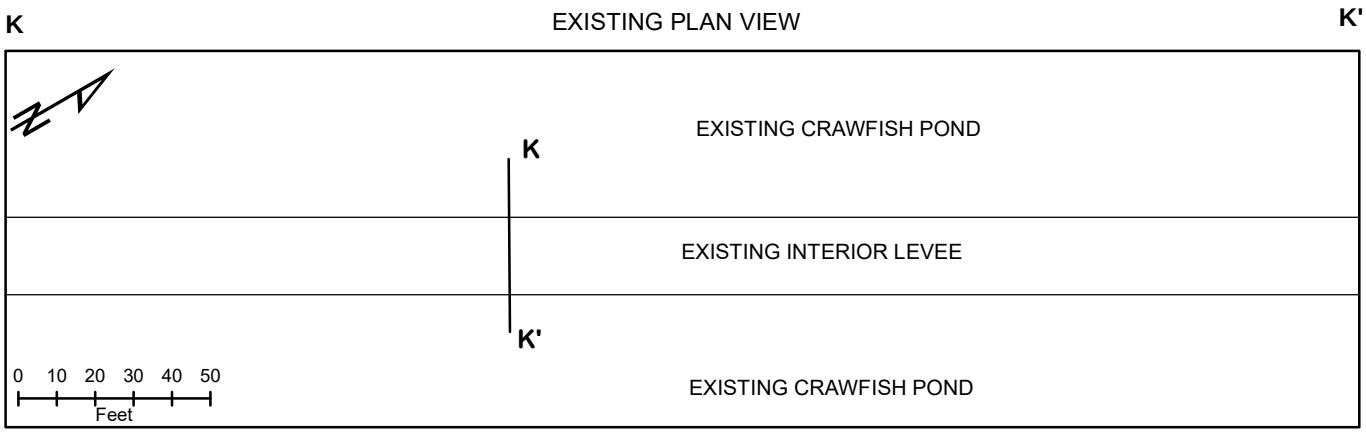
Drawing No.:

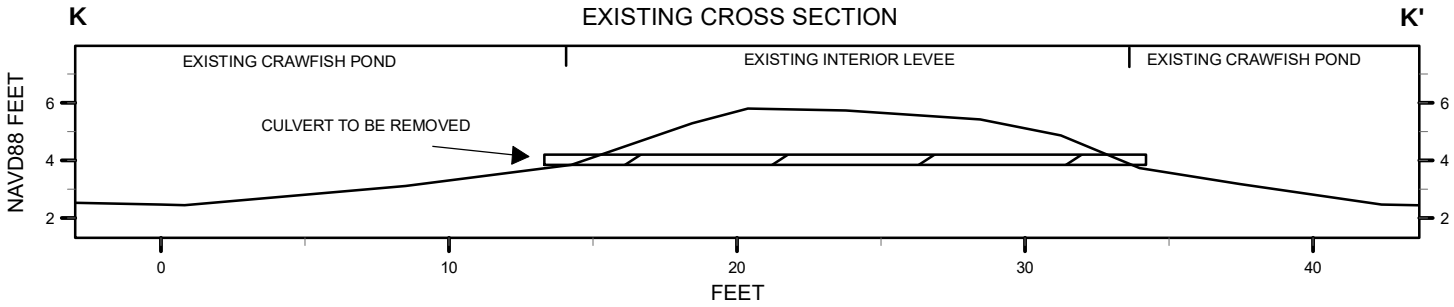
Date: 12/23/2019 Author: CTG

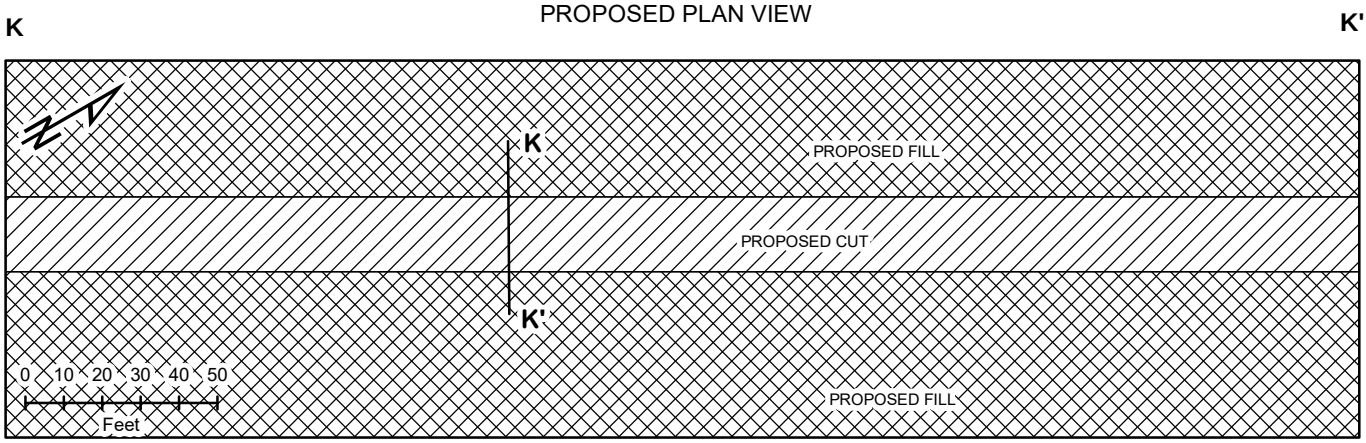
FIGURE 14

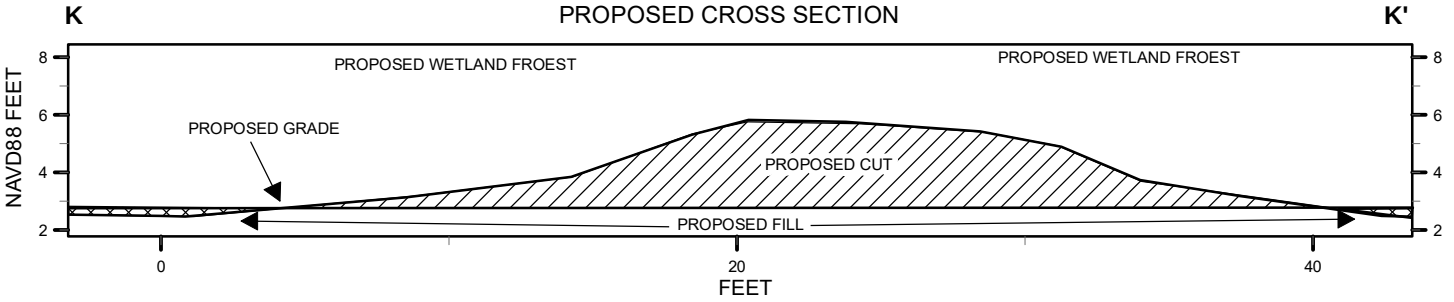
JMB

Document Path: N:\Mitigation Banks\Family Farms Mitigation Bank\Mapping\GIS Projects (.MXD)\COE_Plans\Figure 14 XSections_J.mxd









INTERIOR CULVERT TO BE REMOVED

FILL TO BE SPREAD EVENLY THROUGHOUT PROJECT AREA

PROPOSED FAMILY FARMS MITIGATION BANK

TYPICAL FOR 3 SOUTH LEVEE CULVERTS

CROSS SECTION K EXHIBIT

LAFOURCHE PARISH, LA

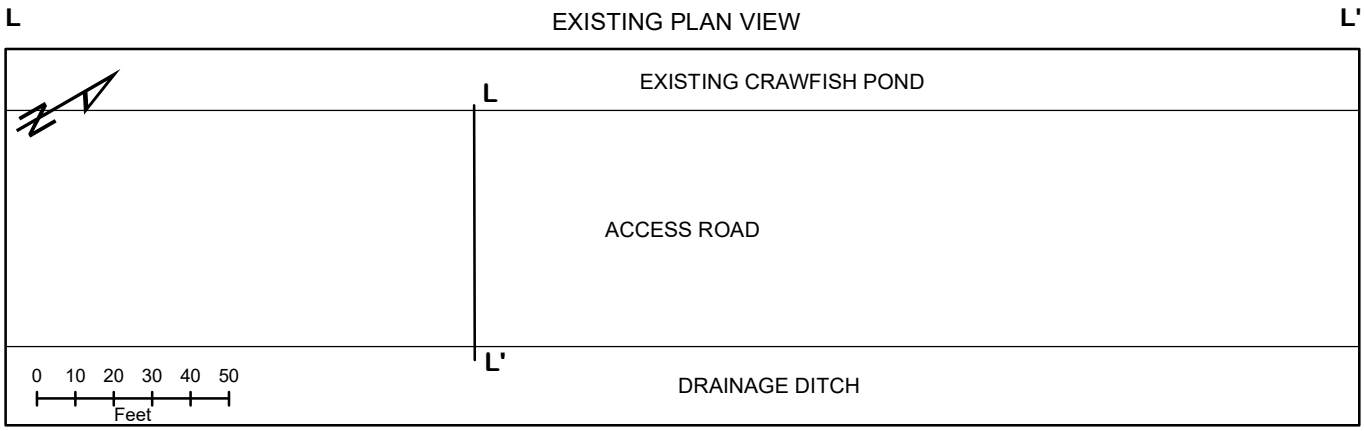
Drawing No.:

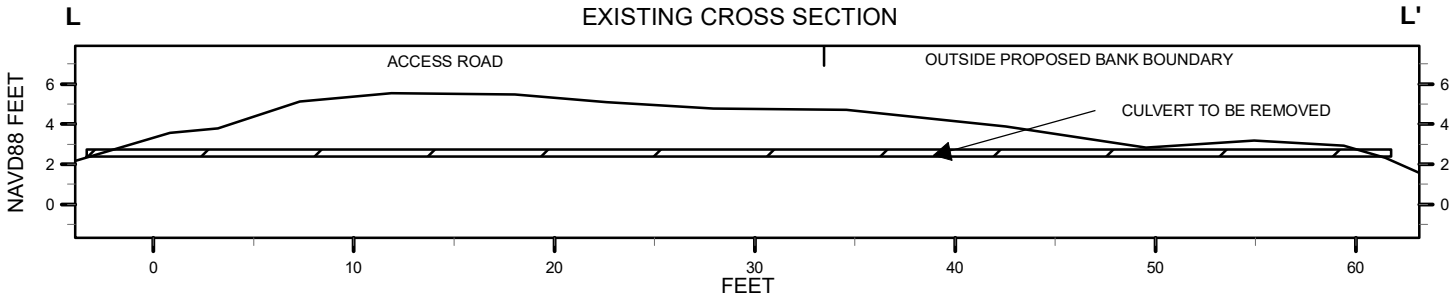
Date: 12/23/2019 Author: CTG

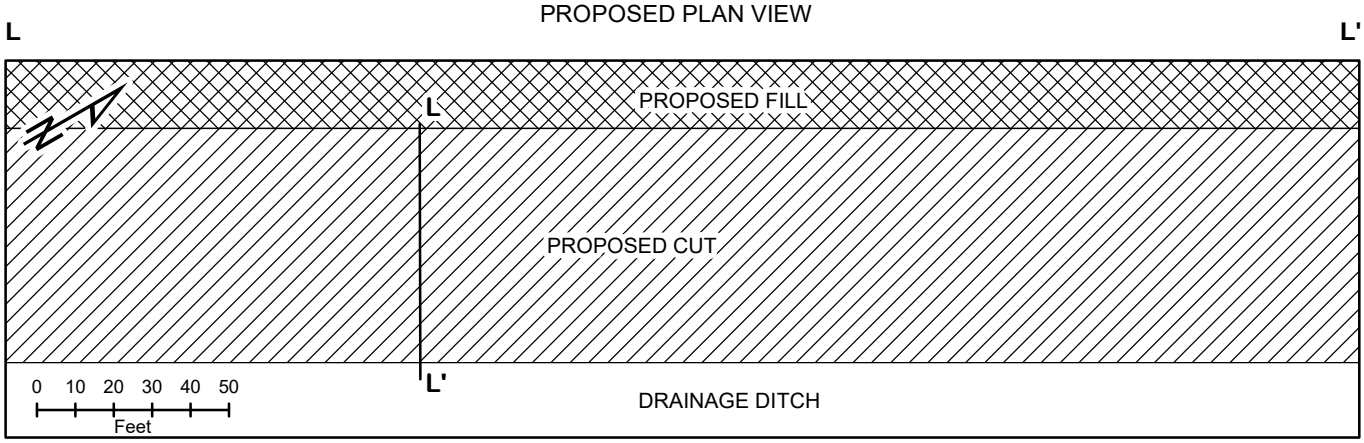
FIGURE 15

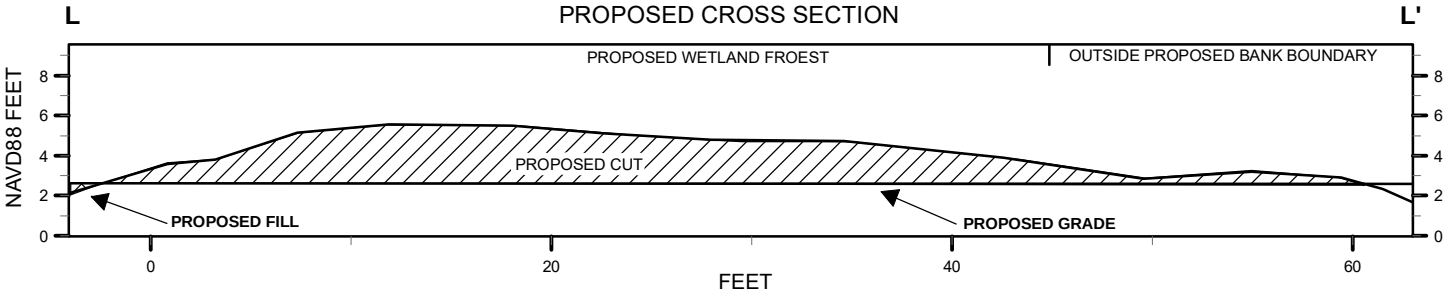
JMB

Document Path: N:\Mitigation Banks\Family Farms Mitigation Bank\Mapping\GIS Projects (.MXD)\COE_Plans\Figure 15 XSections_K.mxd









EXTERIOR CULVERT TO BE DEGRADED

FILL TO BE SPREAD EVENLY THROUGHOUT PROJECT AREA

PROPOSED FAMILY FARMS MITIGATION BANK

CROSS SECTION L EXHIBIT
LAFOURCHE PARISH, LA

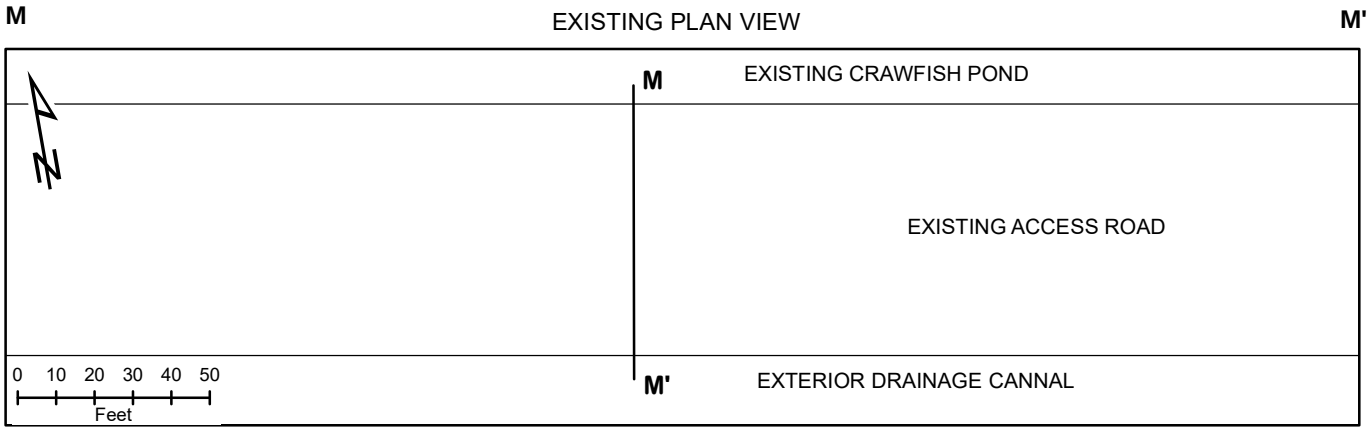
Drawing No.:

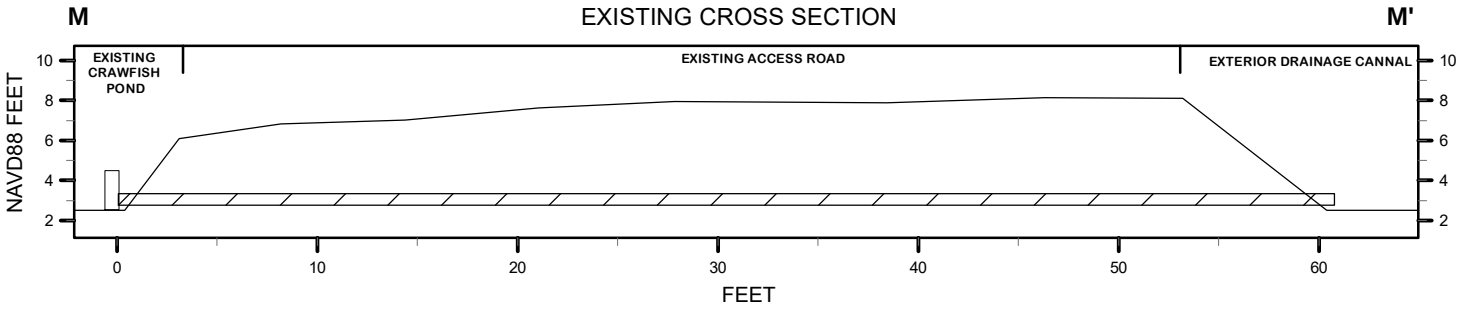
Date: 12/23/2019 Author: CTG

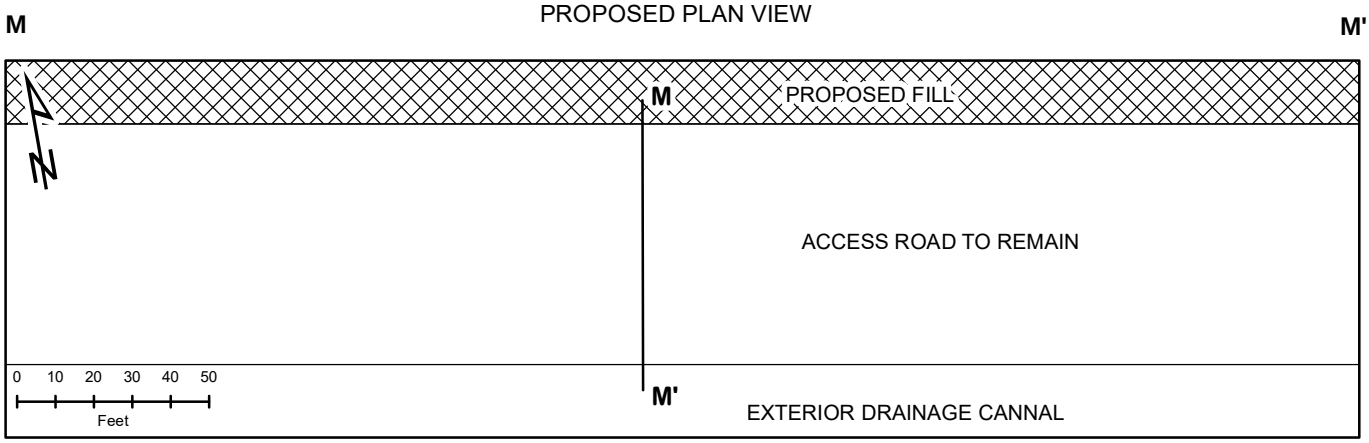
FIGURE 16

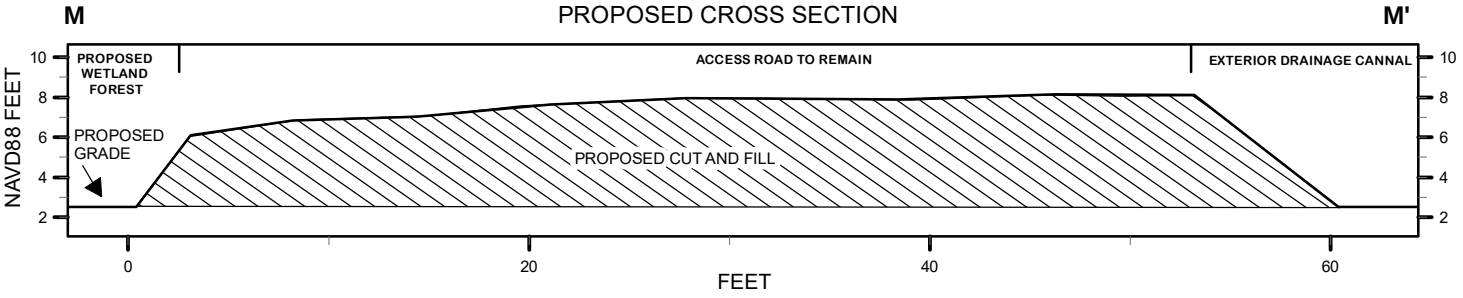
JMB

Document Path: N:\Mitigation Banks\Family Farms Mitigation Bank\Mapping\GIS Projects (.MXD)\COE_Plans\Figure 16 XSections_L.mxd









REMOVAL OF CULVERTS FROM ACCESS ROAD CALCULATIONS

AREA = APPROX 0.027 ACRES OF CUT (NON-WETLAND)
APPROX 0.027 ACRES OF FILL (NON-WETLAND)
VOLUME = APPROX 185.4 YD³ OF CUT (NON-WETLAND)
APPROX 185.4 YD³ OF FILL (NON-WETLAND)

ELEVATION = LEVEE GRADE

FILL TO BE DEPOSITED BACK INTO CUT

PROPOSED FAMILY FARMS MITIGATION BANK

TYPICAL FOR 3 NORTH LEVEE CULVERTS

CROSS SECTION M EXHIBIT

LAFOURCHE PARISH, LA

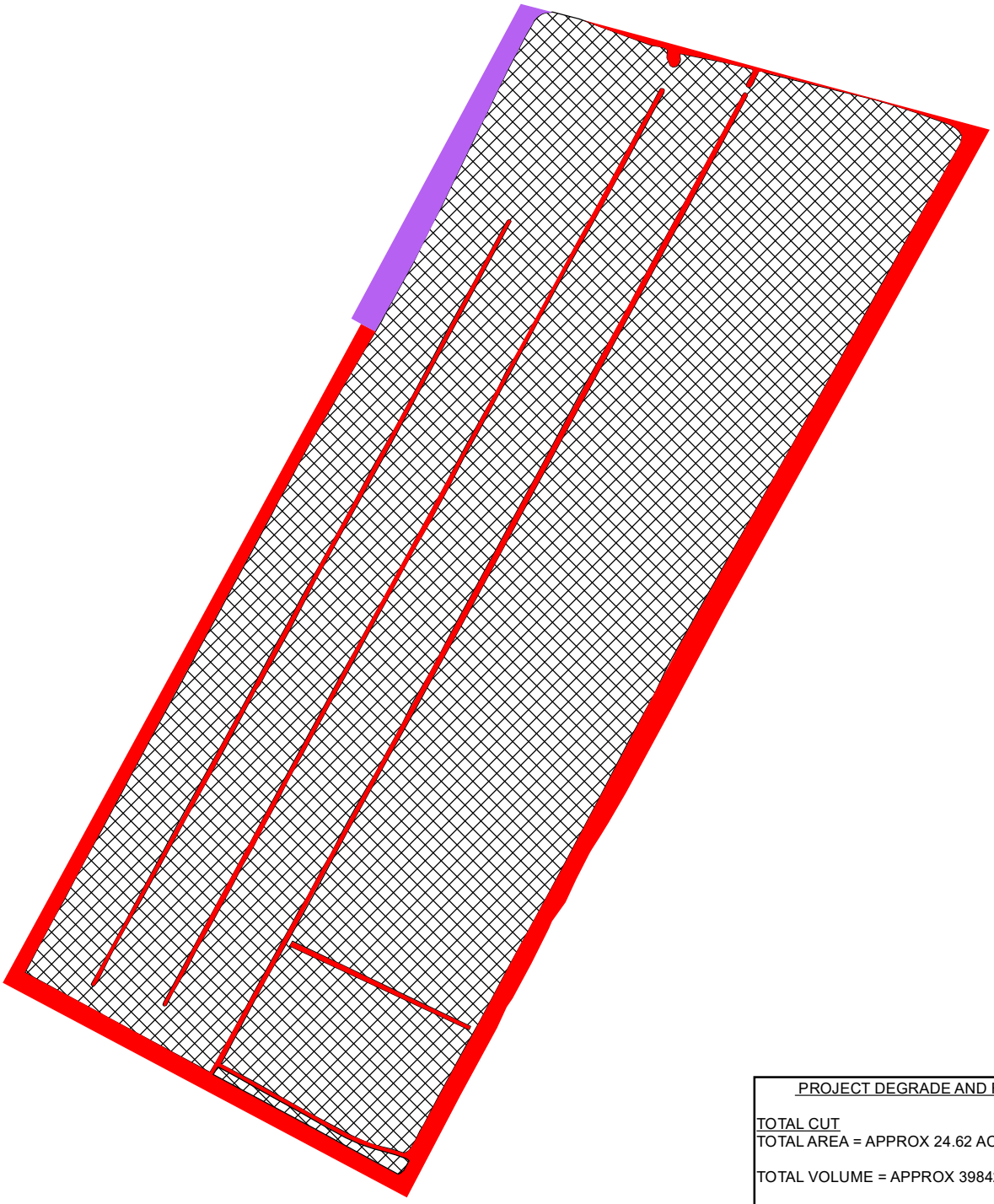
Drawing No.:

Date: 12/23/2019 Author: CTG

FIGURE 17

JMB

Document Path: N:\Mitigation Banks\Family Farms Mitigation Bank\Mapping\GIS Projects (.MXD)\COE_Plans\Figure 17 XSections_M.mxd



Legend

- Proposed Upland Restoration
- Access Road and Interior Levees to be Degraded, Spread, and Leveled
- Proposed Fill Area

PROJECT DEGRADE AND FILL CALCULATIONS

TOTAL CUT
TOTAL AREA = APPROX 24.62 ACRES (NON-WETLAND)

TOTAL VOLUME = APPROX 39842.2 YD³ (NON-WETLAND)

TOTAL FILL
TOTAL AREA = APPROX 103.03 ACRES (WETLAND)

TOTAL VOLUME = APPROX 39842.2 YD³ (WETLAND)

CUT WILL BE SPREAD THROUGHOUT FILL AREA AT A UNIFORM THICKNESS OF 0.237 FEET

ELEVATION = NATURAL GRADE

0 250 500 750 1,000
Feet
1 in = 500 ft

N

PROPOSED FAMILY FARMS MITIGATION BANK

CUT AND FILL OVERVIEW EXHIBIT

LAFOURCHE PARISH, LA

Coord Sys: NAD83 2011 Louisiana South ftUS **Date:** 12/20/2019
Vertical Datum: NAVD88 Feet **Author:** CTG

FIGURE 18

JMB

Document Path: N:\Mitigation Banks\Family Farms Mitigation Bank\Mapping\GIS Projects (.MXD)\COE_Plans\Figure 18 XSection cut and fill overview.mxd

THIS PLAT IS TO BE USED
EXCLUSIVELY FOR THE ACQUSITION
OF REGULATORY PERMITS

0 250 500 750 1,000
Feet
1 in = 500 ft

N

PROPOSED FAMILY FARMS MITIGATION BANK

PLANTING EXHIBIT

LAFOURCHE PARISH, LA

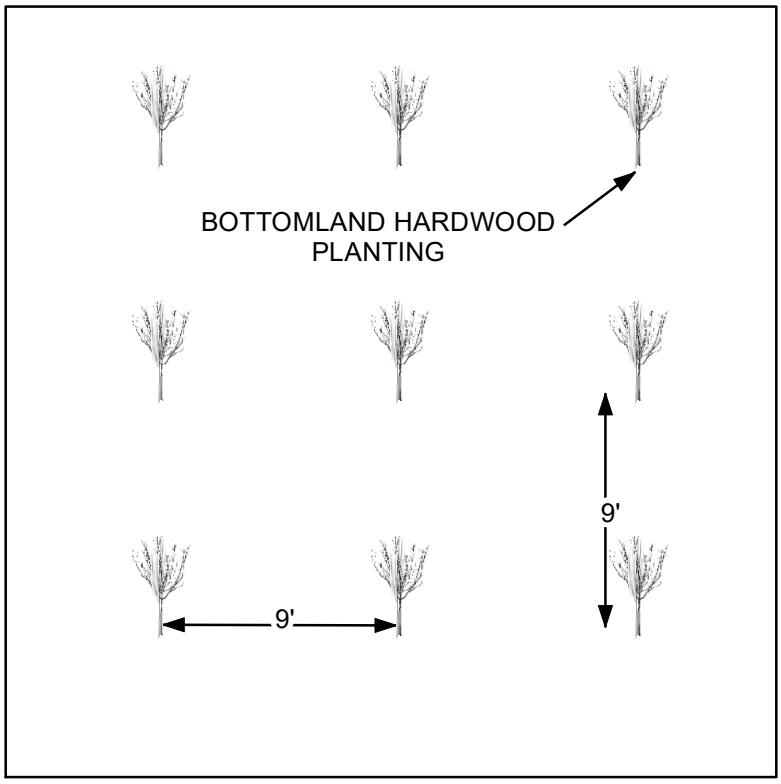
Coord Sys: NAD83 2011 Louisiana South ftUS	**Date:** 12/18/2019
Vertical Datum: NAVD88 Feet	**Author:** CTG

FIGURE 19

JMB

Document Path: N:\Mitigation Banks\Family Farms Mitigation Bank\Mapping\GIS Projects (.MXD)\COE_Plans\Figure 19 Planting_Exhibit_FFMB_12.18.2019.mxd

VEGETATIVE PLANTING



PLANTING NOTES:

BOTTOMLAND HARDWOODS TO BE PLANTED AT 9 FOOT SPACING. PROPOSED TREE DENSITY IS 538 TREES PER ACRE.

PROPOSED FAMILY FARMS MITIGATION BANK

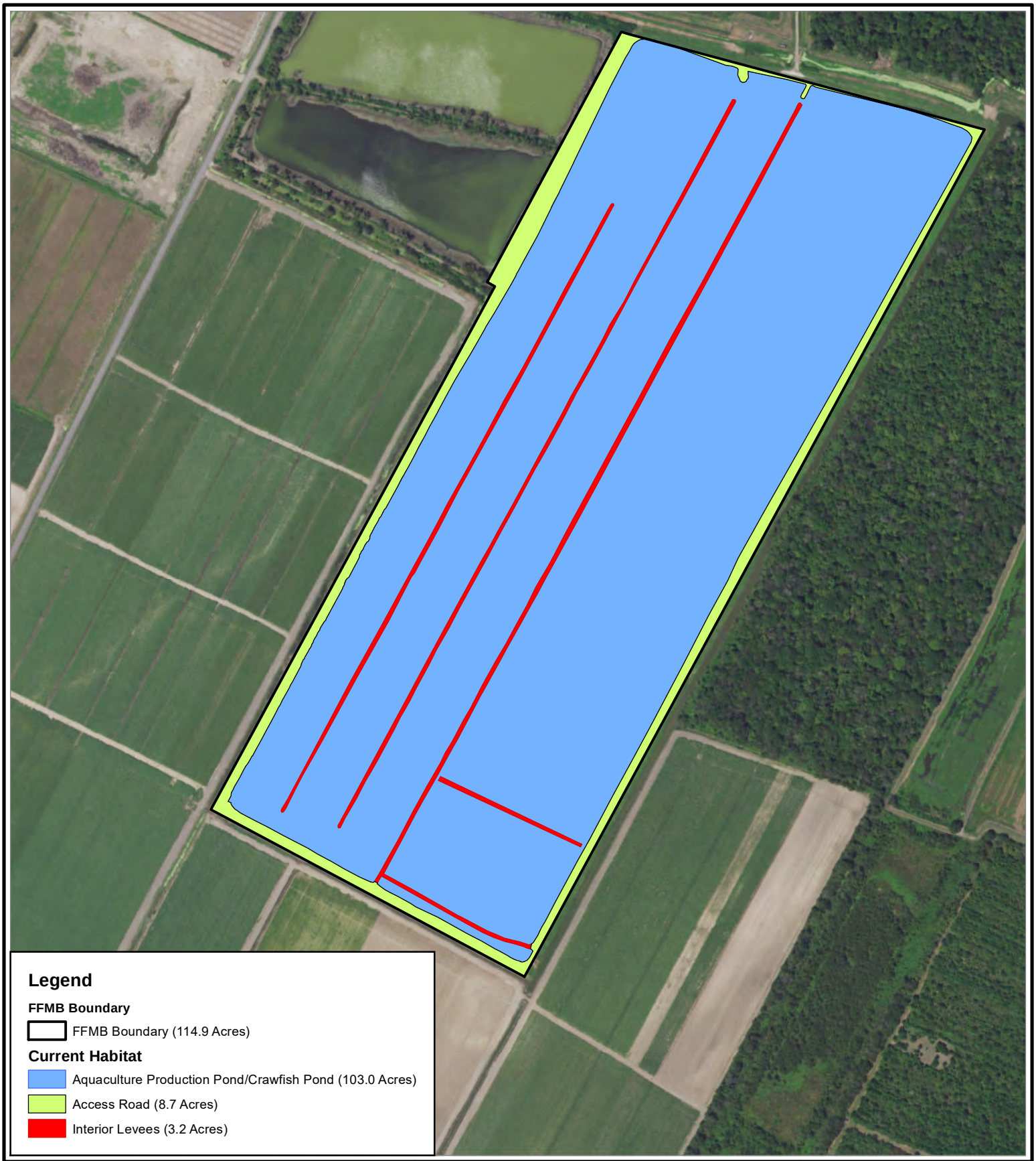
PLANTING EXHIBIT
LAFOURCHE PARISH, LA

Drawing No.:

Date: 12/18/2019 Author: CTG

FIGURE 20

Document Path: N:\Mitigation Banks\Family Farms Mitigation Bank\Mapping\GIS Projects (.MXD)\COE_Plans\Figure 20 XSections_Planting.mxd



0 250 500 750 1,000

Feet

1 in = 500 ft

PROPOSED FAMILY FARMS MITIGATION BANK

CURRENT HABITAT EXHIBIT

LAFOURCHE PARISH,LA

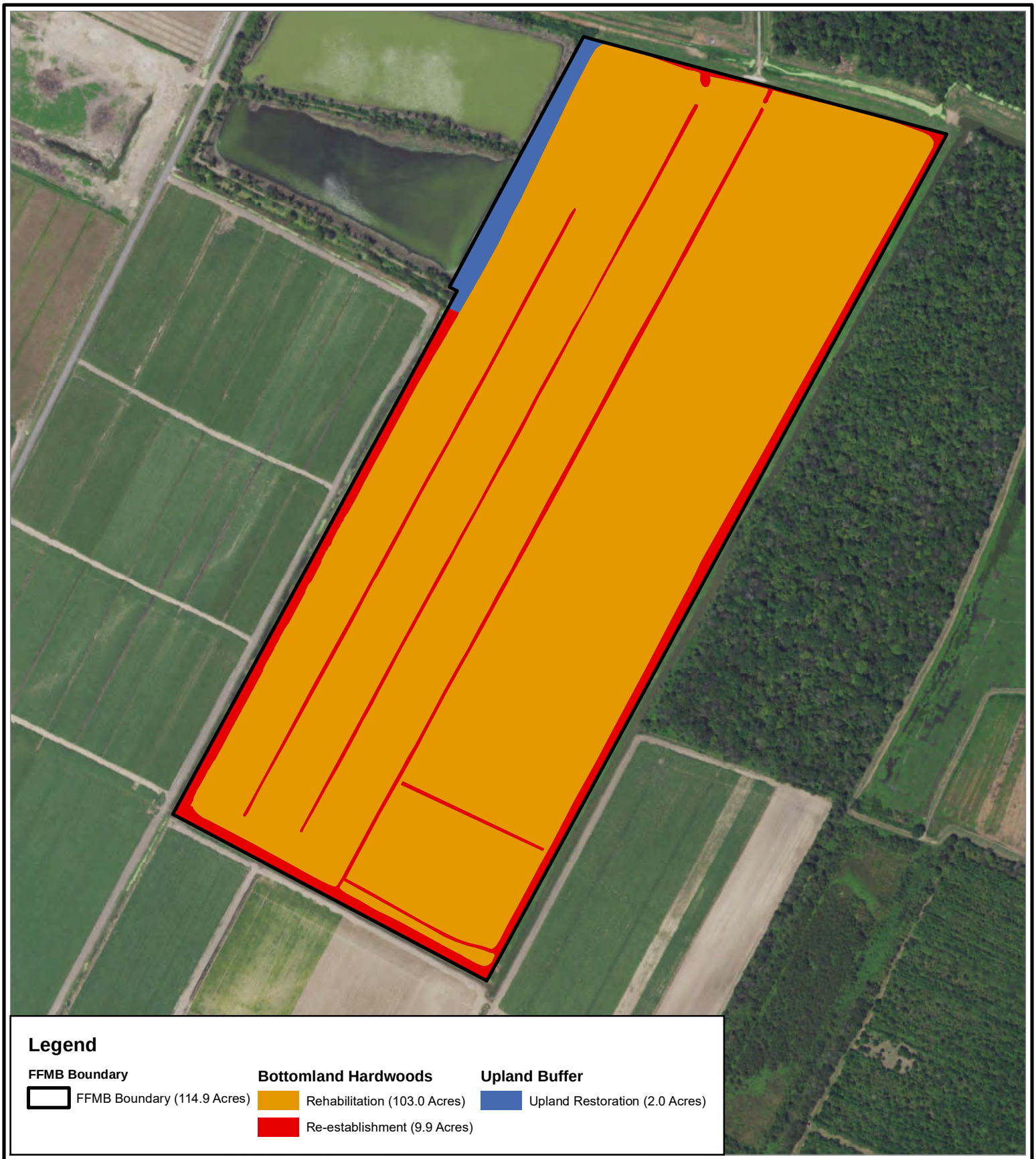
Coord Sys: NAD 1983 2011 StatePlane Louisiana South FIPS 1702 Ft US **Date:** 12/18/2019

Vertical Datum: NAVD88 Feet **Author:** CTG

FIGURE 21

JMB

Document Path: N:\Mitigation Banks\Family Farms Mitigation Bank\Mapping\GIS Projects (.MXD)\COE_Plans\Figure 21 Current Habitat_Exhibit_FFMB_12.18.2019.mxd



0 250 500 750 1,000

Feet

1 in = 500 ft

N

PROPOSED FAMILY FARMS MITIGATION BANK

PROPOSED HABITAT EXHIBIT

LAFOURCHE PARISH,LA

Coord Sys: NAD 1983 2011 StatePlane Louisiana South FIPS 1702 Ft US **Date:** 12/18/2019

Vertical Datum: NAVD88 Feet **Author:** CTG

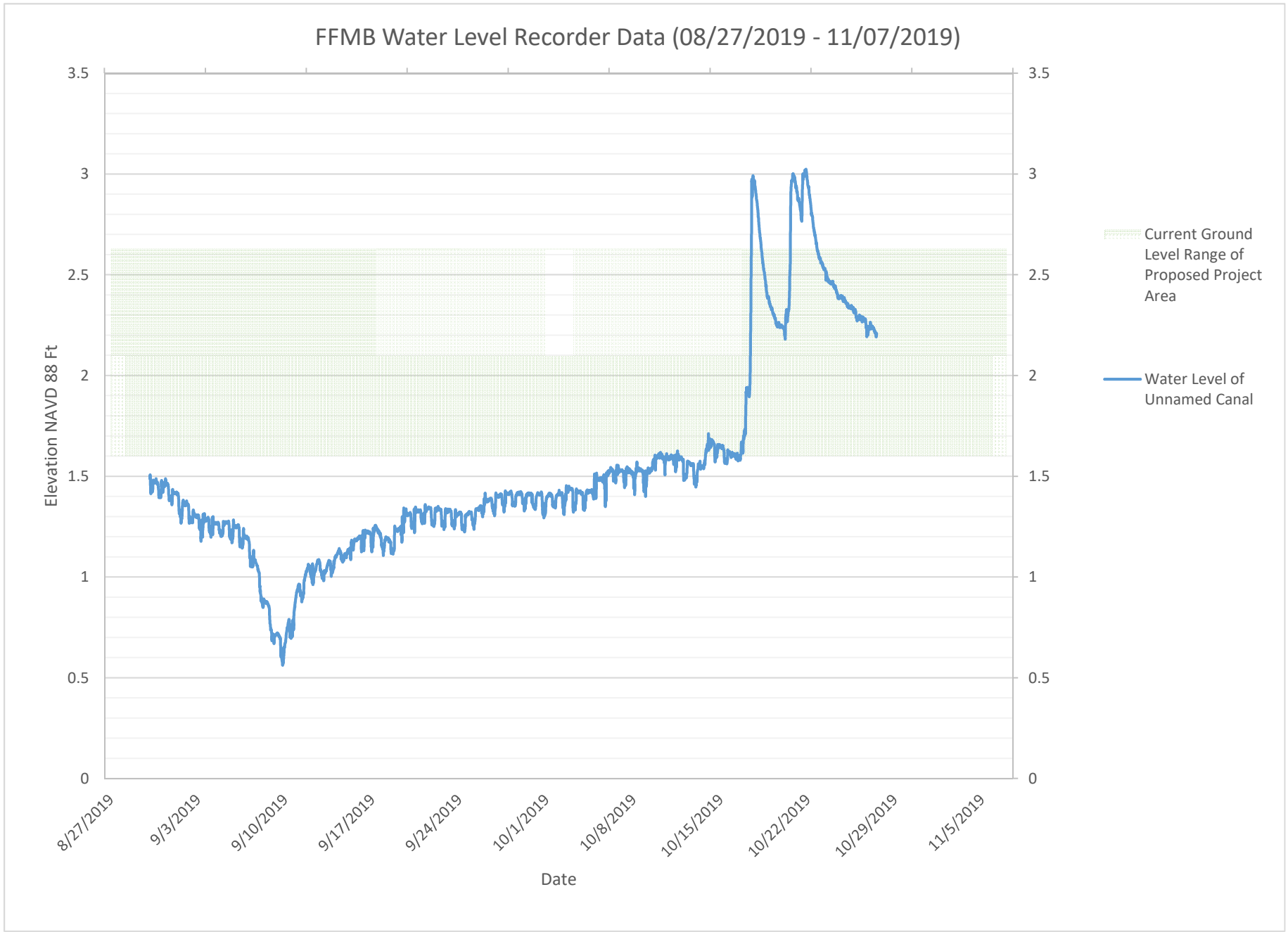
FIGURE 22

JMB

Document Path: N:\Mitigation Banks\Family Farms Mitigation Bank\Mapping\GIS Projects (.MXD)\COE_Plans\Figure 22 Proposed Habitat_Exhibit_FFMB_12.18.2019.mxd

Attachment D:

Water Level Recorder Data


FFMB Water Level Recorder Data (08/27/2019 - 11/07/2019)
Elevation NAVD 88 Ft
3.5
3
2.5
2
1.5
1
0.5
0
8/27/2019
9/3/2019
9/10/2019
9/17/2019
9/24/2019
10/1/2019
10/8/2019
10/15/2019
10/22/2019
10/29/2019
11/5/2019
Date
Current Ground Level Range of Proposed Project Area
Water Level of Unnamed Canal

Attachment E:

Preliminary Jurisdictional Determinations

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, NEW ORLEANS DISTRICT
P.O. BOX 60267
NEW ORLEANS, LOUISIANA 70160-0267

June 09, 2016

REPLY TO
ATTENTION OF
Operations Division
Surveillance and Enforcement Section

Mr. David C. Templet, Jr.
D&S Environmental Services, Inc.
P.O. Box 510
French Settlement, Louisiana 70733

Dear Mr. Templet:

Reference is made to your request for a U.S. Army Corps of Engineers' jurisdictional determination on property located in Sections 58, 59, and 106, Township 14 South, Range 16 East, Lafourche Parish, Louisiana (enclosed map). Specifically, this property is identified as the 115.7-acre tracts E-3-A and E-4, part of the Marcellin Braud Plantation south of Highway 304.

Based on review of recent maps, aerial photography, soils data, and information provided with your request, we have determined that part of the property is wetland and may be subject to Corps' jurisdiction. The approximate limits of the wetland are designated in red on the map. A Department of the Army (DA) permit under Section 404 of the Clean Water Act will be required prior to the deposition or redistribution of dredged or fill material into wetlands that are waters of the United States. Additionally, a DA permit will be required if you propose to deposit dredged or fill material into other waters subject to Corps' jurisdiction. Other waters that may be subject to Corps' jurisdiction are indicated in blue on the map.

You and your client are advised that this preliminary jurisdictional determination is valid for a period of 5 years from the date of this letter unless new information warrants revision prior to the expiration date or the District Commander has identified, after public notice and comment, that specific geographic areas with rapidly changing environmental conditions merit re-verification on a more frequent basis.

Please be advised that this property is in the Louisiana Coastal Zone and a Coastal Use Permit may be required prior to initiation of any activities on this site. For additional information, contact Ms. Christine Charrier, Office of Coastal Management, Louisiana Department of Natural Resources at (225) 342 7953.

Should there be any questions concerning these matters, please contact Mr. Bill Nethery at (504) 862-1267 and reference our Account No. MVN 2016-00228-SQ. If you have specific questions regarding the permit process or permit applications, please contact our Central Evaluation Section at (504) 862-1581.

Sincerely,

[redacted]

Martin S. Mayer
Chief, Regulatory Branch

Enclosures

USACE

FSV / (H) Date: 6-8-2016

Botanist: William Nethery

Requestor: David Templet

MVN-2016-00228-SO 1 of 5

- WETLAND
- NON-WETLAND
- Waters of the US (404)

DP Data Plot

Data Plots

PRELIMINARY

JURISDICTIONAL DETERMINATION

N

Horizontal Scale: 1" = 425'

Family Farms Investments, L.L.C.

Tracts E-3-A & E-4

Overall Jurisdictional Wetlands Map

Lafourche Parish Louisiana

D & S ENVIRONMENTAL SERVICES, INC.

31-2016-JDM

REQUEST FOR A JURISDICTIONAL DETERMINATION (JD)

☐ My file is **larger than 20MBs**; therefore, I am mailing a hard copy to: U.S. Army Corps of Engineers New Orleans District, CEMVN-ODR-S, Rm 271 7400 Leake Avenue New Orleans, LA 70118-3651

OR

☑ My file is **smaller than 20MBs**; therefore, I am submitting my request by email to: cemvn.wetland.request@usace.army.mil

When submitting a hard copy, you should do so by placing files onto a CD to be mailed in. This will ensure that your request is in-processed in a timely manner.

- I am requesting a JD on property described as: A levee system and crawfish pond

(lot or tract #, subdivision name, street, highway, etc)

- Parish: Lafourche Section: 58 Township: T14S Range: R16E
- Tract size: 3.8 Acres, Latitude: 29.846030° N Longitude: -90.862812° W
- The subject property is: (check as many as applicable)
  ☐ cleared ☐ wooded ☐ pasture ☑ agricultural field
- ☐ I have attached a survey/plat map of the property and a vicinity map identifying the precise property location.
  ☐ I currently own this property. ☐ I plan to purchase this property (owner must consent)
  ☑ I am an agent/consultant acting on behalf of the requestor, and:
    ☑ I have enclosed a wetland delineation report.
    ☐ I have NOT enclosed a wetland delineation report.
- Reason for the request: (check as many as applicable)
  ☐ I intend to construct/develop a project on the property for personal use.
  ☑ I intend to construct/develop a project on the property for commercial use.
  ☐ I intend to sell the property and would like a JD
  ☐ The property is to be used for agricultural purposes.
  If agricultural, are you a USDA Farm Participant? ☐ Yes ☐ No
  The last commodity crop was harvested approximately _____ years ago.
  ☐ The property is timberland. The last harvest was approximately _____ years ago. The next harvest will be in approximately _____ years.
  ☐ A Corps JD is required in order to obtain my local/state authorization.
  ☑ This JD accompanies a permit application and is to be used in the permitting process.
  ☐ Other: _____
- Type of determination being requested (explanation attached):
  ☐ I am requesting an approved JD.
  ☑ I am requesting a preliminary JD.

*Signature: _____ Date: _____

***THIS SIGNATURE INDICATES YOU HAVE THE AUTHORITY AND/OR LANDOWNER'S PERMISSION TO SUBMIT THIS REQUEST AND AUTHORIZES A PHYSICAL INSPECTION OF THE SITE.**

- Typed or printed name: Kacey Peterson
  Company name: JMB Partnership, LLC
  Address: 205 Sage Glenn Ln
  Lafayette, Louisiana 70508
  Daytime phone: 337-280-1665
  Email address: Kacey@jmbcompanies.com

If different from above, provide the following:

Name of property owner: Family Farms Investments, LLC

Owner's Full Mailing Address: _____

Phone: _____ Email address: _____

0 200 400 600 800

Feet 1 in = 333 ft

N

Family Farms Investments, LLC

Wetland Determination Exhibit

LAFOURCHE PARISH,LA

Coord Sys: NAD 1983 2011 StatePlane Louisiana South FIPS 1702 Ft US **Date:** 11/13/2019

Vertical Datum: NAVD88 Feet **Author:** CTG

FIGURE 08

JMB

Document Path: N:\Mitigation Banks\Family Farms Mitigation Bank\Mapping\GIS Projects (.MXD)\JD 11.11.2019\Figure_08_JMB_Levee_jd_Wetland_Determination_Exhibit_with_imagery_FFMB_11.13.2019.mxd